

# NON-DUAL EVOLUTION

## AN INTEGRAL WORLDVIEW

JOSÉ DíEZ FAIXAT

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(Translation: Paul Barnes)

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## INTRODUCTION

In its attempts in recent centuries to achieve reach an *objective* description of the world, modern science has oftentimes forgotten nothing less than the actual *subject* conducting such research. The ancient contemplative traditions, meanwhile, delving deep into the core of *subjectivity*, frequently turned their backs on the *objective* universe. Some disenchanting the world, and other cutting themselves off from it, they have taken life on the planet to a schizophrenic situation difficult to elude, to the brink of destruction.

In the book you have in your hands, we shall attempt to surmount this painful breach, posing a non-dual worldview, which dynamically integrates objective and subjective, realistic and idealistic, outer and inner perspectives. We shall thus be able to see how by jointly studying these two antagonistic approaches that have been denying or ignoring each other for too long, by transcending their respective biased limitations, they will shine light on each other and both will be surprisingly enriched in a harmonic integral worldview.

The evolutionary hypothesis we shall expound and test in the following pages has its origin in this fertile encounter between scientific and contemplative traditions. This was sought in itself. It emerged, unexpectedly, after investigating both worlds for some time. Among a pile of apparently unconnected information, it “the hidden pattern that connected them” appeared in an elegant and simple symphony. Far from being a mere product of chance, a simple accident in a world inexorably condemned to thermal demise, evolution seemed to dance ingeniously to musical harmonics. After testing for more than three decades the accuracy of this hidden pattern in very different spheres of reality, we believe that it is time to rid ourselves of the straightjackets of the materialistic paradigm and propose a more integral worldview, one capable of simultaneously encompassing both the subjective and objectives facets of reality. Unprejudiced. Honestly.

This is the issue this book will address. Initially, we may feel that the ground is opening up beneath our feet, or we might see the entire structure of beliefs that we had built crack and collapse unexpectedly. Do not fear, however, as the new landscape that is beginning to emerge no longer condemns us to living in an absurd and meaningless world, but invites us to participate in the amazing creative unfolding of infinite life we really are. To lay out this emerging landscape with a certain degree of order, we shall divide the book into three chapters. Let us see.

In the first chapter —***A Hidden Pattern in Evolution***—, we shall expound our hypothesis about the rhythm of evolution and development using data provided by palaeontology, anthropology and history in the collective ‘macrocosm’, and with information provided by embryology and developmental psychology in the individual ‘microcosm’. The reader will see that a simple basic principle of musical harmonics precisely marks out the striking pattern in which the major evolutionary novelties have successively emerged throughout the entire history of the cosmos since its origin. Who said that evolution was a mere game of chance in a meaningless universe? At the end of this chapter, we shall show other recent research, conducted in very diverse spheres and from very different approaches, which coincide fully with our proposal. It seems that things are changing.

Based on the surprising finding presented in the first chapter, the aim of the second chapter —***The Non-Dual Key***— will be to lay the foundations of the new worldview this discovery leads us to adopt. This all suggests that it will be necessary to go beyond narrow monistic approaches —both materialistic and spiritualistic— to begin to understand the world from a non-dual perspective that transcends and integrates the partial truths of realism and idealism. We shall show how this emerging non-dualistic worldview is very clearly in tune with the core of the major traditions of wisdom and also provides the evolutionary approach of the new science.

While the approach employed in the first two chapters will be basically theoretical, in the third —***The Integral Experience***—, we invite readers to experience within themselves the creative dynamics of life. To

do so, we shall provide some basic guidelines that may facilitate the displacement of our sense of identity from the allegedly autonomous character with which we are identified to the non-dual source we really are. From that viewpoint, we shall be able to perceive, from moment to moment, the spontaneous and creative emergence of life in and through ourselves, in an eternal, unceasing circular play between the immutable original Void and the fleeting forms of the world.

Science buffs may be interested in the first chapter, philosophers in the second, and those in search of a contemplative life in the third, but we invite everyone to read the complete book, because each of its parts provides a basic perspective for an integral understanding of the dynamics of the world. We may thus finally discover that reality, our own reality, is much more fascinating than we could ever have imagined.

## 1. A HIDDEN PATTERN IN EVOLUTION

For many years, I have been intrigued by the fascinating creativity of the universe, in its material, biological and mental aspects. More than forty years ago, I tried to find an answer to the surprising evolutionary phenomenon, passionately investigating within the diverse branches of Western science and simultaneously in the rich existential research of the Eastern traditions of wisdom. Suddenly, unexpectedly, all that research crystallized in January 1981 in a very precise hypothesis about the rate of the evolution.

On collating this hypothesis –which in principle seemed to be a simple, ingenuous and daring insight that had fall out of the blue– with empirical data from different spheres of reality (paleontological, anthropological, historical, embryological, psychological, etc.) and verifying its surprising validity and precision, over the years it has been become a solid scientific (falsifiable) proposal that shows an unexpected periodic pattern in the emergence of evolutionary novelties and that hence clashes head-on with the still prevailing view of how the world works.

As this work has been written single-handedly during this time, with no other company than hundreds of books, and given the breadth and scope of the proposal, it seems advisable to open this hypothesis regarding “the hidden rhythm of evolution” to public criticism so that those interested can carry out their own inquiries with a view to testing its validity and, if need be, make any adjustments they deem necessary. You are cordially invited to do so!

In order for you to get an initial idea of what we are discussing, we shall next summarize, in four paragraphs, the general evolutionary scenario that will unfold in the following pages. This scenario will highlight the existence of a very precise spiral rhythm in the emergence of the evolutionary leaps that mark the history of the universe in quantum terms.

This book surprisingly reveals the existence of a very precise spiral rhythm in the emergence of the evolutionary leaps that mark the history of the universe. The proposed hypothesis is very simple: just as in any musical instrument successive second harmonics (1/3 of the vibrating unit) progressively generate new sounds; these same second harmonics generate all the major evolutionary novelties in universal dynamics as a whole. It is truly surprising that such a simple proposal is found to be precise and categorical when cross-checked against historical data. Let us see.

Fitting our ‘periodic table’ of rhythms to the date of the appearance of matter –the Big Bang– and of organic life, we see that every single instant of the emergence of successive taxonomic degrees of human phylogeny is marked out with utter precision: **Kingdom: animal, Phylum: chordata, Class: mammal, Order: primate, Superfamily: hominoid, Family: hominid and Genus: homo!** The same then occurs with all the stages of maturation of our primitive ancestors: **H. habilis, H. erectus, archaic H. sapiens, H. sapiens and H. sapiens sapiens!** Once more, the precision of our hypothesis is repeated in the successive transformations that humanity has experienced in its more recent history: **the Neolithic, Antiquity, the Middle Ages, the Modern Age and the emergent Postmodern Age!** If, as we see it, all these stages resoundingly fit the provisions of the ‘periodic table’ of rhythms that we have proposed, it is more than likely that our hypothesis may also provide the key to glimpse the successive phases yet to be deployed in the years to come in an ever-accelerating process that will eventually lead to a moment of infinite creativity –Omega– within a couple of centuries.

All this is, indeed, unexpected and surprising, but is now almost magic when we verify that the same hypothesis that has behaved with utter precision when applied to the process of global evolution, also does so when cross-checked against the process of development of the individual human being! Within the same time frame, with the same pattern of folding and unfolding, and passing through the same stages, our ‘periodic table’ of rhythms periodically marks out –step by step– the successive phases embryologists,

developmental psychologists and spiritual teachers talk of, thus confirming the old idea of phylogenetic-ontogenetic parallelism and pointing very specifically to an astonishing fractal and holographic universe.

It is impossible that all this accumulation of linked “coincidences” –in both the field of overall development and that of individual human development– highlighted in this paper is the product of mere chance. The conclusions that emerge from this entire clash head on with many assumptions of predominant materialistic science. Our proposal, which provides a better fit to the presented data, points to the non-duality of energy and consciousness, as posed by many traditions of wisdom. From these pages, as we have said, we invite all our readers to participate in this emerging experiential and theoretical research in which dazzling prospects can be glimpsed.

To start, we shall outline the emerging world view that is beginning to appear in the new science, as it is where our proposal may reveal its full potential. Things are changing.

### **A new universe**

During recent decades, the apparently solid view of the mechanistic and materialistic world has started to show alarming cracks. Approaches that a century ago were taken as rigorous and almost irrefutable are starting to be seriously questioned.

These approaches postulated that the universe is moved by a simple game of chance, in progressive degradation and inexorably tending toward thermal death. In major contrast with these dark auguries, new science views –beset with surprise– a fascinating creativity in all spheres of reality. An unstoppable evolutionary current runs through entire history of the cosmos, one that generates all types of novelties. The supposed universal machine, virtually condemned to the scrapyard, is now revealed as a rare living being animated by a self-creative permanent force. It seems that Nature starts to reveal the secrets of its holistic inner tendency, one which drives it to climb the ladder of organized complexity. This ascending drive has been creating progressively differentiated, integrated and inclusive units step by step.

Mechanistic Science harbored the reductionist dream of explaining the functioning of complex structures starting out, exclusively, from its most basic components. New science has forsaken that dream on verifying repeatedly and in diverse levels of reality that the whole is greater than the sum of the parts. The flow of evolution engenders novelties which, though logically compatible with precedent structures, cannot however be explained by them. There is thus a dynamic, hierarchical schema of the world in which emerging levels are integrated with previous ones, thereby generating more complex, inclusive organisms with increasing awareness. Elemental particles form part of atoms, atoms part of molecules, molecules part of cells, cells part of organisms and so on. The universe thus reveals itself as a hierarchy that extends unlimitedly upward and downwards throughout the course of evolution.

On the other hand, each one of these levels of universal reality is structured by an infinite reciprocal interplay among individuals and communities. Some and many are involved like reflections in a grid of mirrors facing one another. An individual devoid of an environment is not possible, neither is a group without the individuals that compose it. We cannot separate off isolated unities in these universal networks of interrelationships and interconnections. As Quantum Physics has demonstrated, the scope of these complex webs of relations goes beyond what is humanly conceivable, even transcending our time and space schemata. There are no actually separate “parts” in any level of the evolutionary scale. On the contrary, as in a holographic plate, each “fragment” of the world is no more than a concrete expression of the same, unique totality. The universe starts to reveal itself to the eyes of new science as a unified field that is dynamically reflected in each and every corner of itself.

Attempts were made to build the world upon the solid and strong foundations of matter, but this myth has not stood up to empirical testing. Subatomic analysis has literally taken the floor away from under our feet. Our supposedly indestructible material basis has dissolved in pure forms, patterns, orders and relationships in a fabric that is no longer substantial, but purely abstract instead. We are supported by evanescent forms that vertiginously emerge and disappear in an intangible void. Within the scientific community, it has even been asserted that the universe is beginning to look more like a great thought than a great machine.

The materialistic focus of classical science also aimed to describe the world “objectively”, placing the “subject” making the description on the sidelines. However, the emergent postmodern perspective has once more revealed the complete ingenuity of this project. The observing mind is inevitably part of the observed universe. There is not object without subject, no outside without inside, no reality without consciousness. Both terms are definitively interrelated and therefore any attempt to comprehend the phenomenal world integrally must necessarily include both facets. The dynamics of evolution is thus perceived as a generator of entities, not only progressively more organized and complex in their external appearance, but also, at the same time, of greater inner awareness. We cannot limit our vision solely to the surface of things, because, although we try to ignore them, the depths of lucidity will finally become patent to us over and over again.

The universe that surprisingly begins to reveal itself before our gaze has little to do with that blind, insensitive artifact, that mechanical and inert world in which the human being imagining it did not even have a place in it. The new approaches that study reality no longer consider us aberrant creatures in a world without sense, but rather as redolent expressions of the creative flow of totality, authentic microcosms that reflect with increasing clarity, the infinite richness of a fascinating macrocosm.

Our research on the rhythm of evolution falls within this new perspective of a universe that is self-creating—a generator of progressively more complex and organized novelties,—, hierarchical—in which each new level transcends and becomes integrated with all previous levels,—, holographic—in which each part reflects the totality,—, impermanent—in a continuous dance of creation and destruction,—, lucid—capable of knowing itself,—, and void—without a basic substance that supports it.

In this new emerging outlook, our daring proposal that a harmonious pattern that governs the rhythm of evolution exists no longer sounds so shocking. Let us see.

### **The crisis of Darwinism**

Nowadays science agrees that evolution is a core feature of the universe. There is a complete consensus regarding the dynamic and creative features of phenomenal reality in all fields of human knowledge — astrophysics, biology, psychology, sociology, and others—. Nevertheless, there are discrepancies in the interpretation of the facts.

Darwin’s theory of evolution was primarily based on random mutations and the “survival of the fittest”. The “synthetic theory” extended these formulations in the late 1930s and early 40s with the contributions of Mendelian genetics and population-based genetics, maintaining as explanatory basic elements the aforementioned random mutation and natural selection. This synthetic theory enjoyed almost unanimous acceptance for two or three decades, but gave rise to a great wave of dissent from 1970 on. The idea that the synthetic theory is wrong is beginning to take shape for many paleontologists, geneticists, embryologists and taxonomists, who refute the random factor as the sole principle governing the evolutionary process. They disagree that natural selection explains the emergence of new species. They affirm that fossil records do not fit Darwinian gradualism and denounce that the theory does not reflect the phenomenon of increasing complexity.

Biologists find it very difficult to understand how a fundamentally random search among an extremely high number of possibilities could result in the emergence of living beings with their evident level of complexity. As we understand it today, evolution cannot be conceived as having random variations as its sole material. Organisms vary as a whole; huge numbers of mutations would hence be required to occur simultaneously, in the appropriate way, when their “need” arose and with a close links among them... How could all this be fulfilled by chance? The same could be said of the formation of any of the complex organs, for example, the internal ear or the brain. A classic problem has been the difficulty in explaining intermediate forms in the development of complex adaptations, as in the case of the eyes. Darwin himself confessed that it was absurd to imagine that the eye could have evolved by natural selection.

Darwin’s original idea about new species emerging gradually at the initiative of natural selection along the course of time is currently being questioned. The simple principle of natural selection seems inadequate to understand and predict all evolutionary processes. Spontaneous mutations may explain variations within a certain species, but not the subsequent variations among them.

Long before Mendel’s laws were known, many varieties of plants and breeds of domestic animals were already being developed by means of selective breeding. There is no reason to doubt that a similar development of breeds and varieties may arise in Nature under the influence of natural selection instead of artificial selection. The mechanisms of microevolution —small evolutionary changes consisting in minor disturbances in genetic proportions, the number of chromosomes or chromosomal abnormalities— may be explained by the Neodarwinian theory as a function of random mutations, Mendelian genetics and natural selection. However, this mechanistic scheme, which may be valid at a small scale —in a given species—, encounters countless problems when trying to explain the origin of new species —known as “speciation”— and even greater difficulties when faced with the emergence of genus, families or higher taxonomic divisions. Macroevolution or typogenesis —the evolution of these higher-order taxonomic categories— show far too pronounced differences among divisions to have arisen from gradual transformations. The conclusion seems to be that the laws that govern large-scale processes —such as the origin of new types or the extinction of species— are different to those ruling the simple processes of adaptation to the environmental. Thus, the reductionist expectations of “macro” scale processes being immediately inferable from the “micro” scale are fully refuted. In the words of C.H. Waddington: “one of the most fundamental problems of the Theory of Evolution is that of understanding how the evident discontinuities found among the main taxonomic ranks: *phylum*, family, species, et cetera, have emerged”.

The growing sensation prevails that is no longer possible to explain speciation simply by natural selection. Some have even asserted that natural selection does not in fact have anything to do with the emergence of new species. In recent years, the gradualist conception of evolution has been seen to be responsible for only a small part of evolutionary change. Furthermore, deepest changes in the biological evolution have been seen to take place in specific moments of the history of groups, occurring in a very rapid manner and giving rise to stable species that suffer very few subsequent variations.

Fossil records mainly consist in thick layers of earth in which some species are evenly distributed, separated by thin surfaces through which species suddenly change in a process of multiple speciation. Many paleontologists think that this intermittent history shown by fossils should not be attributed to simple gaps in the record, but that it basically demonstrates the rhythm with which life has evolved. Therefore, many of them have started to dispute the classical conception of the *tempo* of evolution. The Darwinian version of a slow, continuous and gradual process has given way to the interpretation characterized by discontinuous, sudden leaps and changes. There is hence an evident renaissance of the idea of vigorous, sudden and energetic speciation, versus calm gradation, strongly giving rise to the perception that fossil records contain much more information than what might be imagined via natural selection alone. This is due to the emergence of non-predictable patterns thanks to our present knowledge about small-scale populations and processes.

In 1972, S. J. Gould and N. Eldredge published a seminal paper in which they demonstrated that nature progresses by sudden leaps and profound transformations and not through small adaptations. According to the theory of punctuated equilibria, evolutionary leaps are relatively sudden processes; speciation stops for long periods in which existing species persist without fundamental variations and without creating new species (stasis). While a species persists, it remains relatively invariable; its legacy of genetic information is transmitted without major changes to the following generations. At some point, however, this stasis is suddenly broken and an evolutionary leap forward takes place. As Gould puts it, “the history of any one part of the earth, like the life of a soldier, consists of long periods of boredom and short periods of terror”.

However, synthetic theory has difficulties in explaining not only the sudden changes in species, but also the long periods of stasis. Therefore, some researchers have begun to seek possible explanations for the sudden emergences of new species —analyzing changes in the rhythm of embryonic processes that may produce major effects in adult organisms— as well as the surprising stages of stasis —studying the possibility that the genetic or biological development of organisms may permit no more than the monitoring of certain morphological routes. In that case, once the species has found a good solution to environmental problems, it will adhere to it by means of numerous changes and secondary genetic disturbances, not changing again until it has achieved a suitable stable solution for the future.

Specialists in macroevolution make other provocative observations about fossil records that are difficult to explain from simple Neodarwinian postulates. For example, the fact that the simpler an organism is, the longer its period of permanence period, or the fact that complete diversity seems to be closer to a stationary state (or stasis), i.e. the tree of life has stopped sprouting branches and has reached a certain equilibrium, or the ever present puzzle that practically all of the animal phyla—types of animals— have emerged precisely among the earliest remains of the Cambrian explosion, 530 million years ago, or the evident growth in complexity of organisms throughout evolution.

### **Oriented evolution**

Classical science tried to explain the novel events of evolution as mere products of whimsical chance, happenstances that go against the tide in an absurd universe fatally doomed to total disorder. It was said that the emergence of life and mind was only a virtually impossible, odd anecdote in a world of inert and inanimate material.

It is also curious how a theory such as that of natural selection, which aims to clarify the origin of the species, offers no explanation —as Darwin himself admitted on several occasions— for the phenomena of the increase in complexity, which is the essential feature of evolution. According to J. Maynard Smith —one of the main theorists of Evolutionism—: “There is nothing in Neodarwinism which enables us to predict a long-term increase in complexity”. In other words, natural selection does not imply any directionality in time. Moreover, observing the overall picture of evolution, we can perceive a characteristic arrow in the process with pristine clarity: over time, living beings have mostly proceeded from a simple structure to a more complex one, their psyche and their autonomy increasing in parallel to this process. Paleontological documents clearly reveal the major currents of increasing complexity in structures and relational functions, as well as the simultaneous advancement of the capacity of such organisms to capture and process information from the environment. All this has led many researchers to propose alternative or complementary theories that attempt to explain the observed phenomena.

As previously stated, science is starting to understand that, simultaneous to the process of growth in homogeneity and positive entropy —disorder— perceived in the universe, the reverse phenomena occurs with the same naturalness, i.e. the progressive increase in heterogeneity and negative entropy. The latter is a mathematical counterpart of the concept of information which may be considered as a new measure for order and organization. Contrary to classic thermodynamics, which aimed to reduce the processes of self-

organization to mere accidental events, to simple insignificant anecdotes, today's thermodynamics of disequilibrium allows us to understand the progressive and accelerated evolution of living beings and our own human history as something more than mere strange accidents in cosmic evolution.

Up until the 1970s, researches tended to hold the conception —presented in the most expressive way by Jacques Monod— that evolution acts mainly due to casual factors. In the 1980s, however, many scientists started to be convinced that evolution is not an accident, but a necessary event that occurs when certain parametrical conditions are fulfilled. Laboratory experiments and quantitative formulations confirm the non-accidental character of the evolutionary processes. It is beginning to be evident that the continuous deployment of the organized complexity of the universe, its intrinsic sporadic capacity for sporadic self-organization constitutes a fundamental and profoundly mysterious property of reality. A new and fascinating paradigm is beginning to emerge, that of a creative universe, one that recognizes the surprisingly innovative and progressive nature of universal dynamics. There is much talk of the crazy organizing frenzy of matter, of the animated evolutionary ghost that starts to appear in our worldview, of the strange self-organizing capacity of nature, of its mysterious tendency to ascend the steps of complexity, those of the autopoietic dynamics —self-creation— of the whole universe.

The new sciences of evolution thus perceive a new harmonious and natural coherence throughout the creative universal process from the mere originating instant. They deny that the random factor is the only explicative argument of novel phenomena and they claim that the old theory does not explain the surprising emergence of increasing complexity at all. On the contrary, they advocate the non-accidental character of evolutionary processes and provide numerous proofs that all dynamical systems, at different levels of reality, develop similar creative patterns. The new approaches show how any dynamic system far from a state of equilibrium may leave its permanent state when some of its environmental parameters change. In these situations, systems may spontaneously reach new states of equilibrium of greater complexity subsequent to a chaotic and indeterminate phase. The overall course of evolution thus looks like stairs in which horizontal steps alternate, almost without changes, with abrupt leaps in level.

Both within theoretical or empirical works and in hard or soft sciences, the aim is to understand the innate creative tendency of nature; the surprising patterns of organization in which the game of chance is channeled. We hear about: dynamic attractors (D. Ruelle), morphogenetic fields (R. Sheldrake), archetypal channels (C. Waddington), implied orders (D. Bohm), fractal structures —self-similar— (B. Mandelbrot) and also stratified stabilities (J. Bronowski). It now seems evident that creativity cannot be reduced to a mere random product, but rather to the holistic intervention of unified fields that may explain both the overall totality of creative phenomena and their quality of instantaneity. The implacable integrity of these fields would also explain their capacity to organize diverse and independent elements in a harmonious way by means of a unique momentum.

Our hypothesis about the rhythm of evolution contributes novel features to this research and may also offer a line of work full of pleasant surprises.

### **A harmonious solution**

We were saying that the supposed solidity of matter, upon which the world was supposedly raised, has faded away before the gaze of New Science into pure forms and relationships within an abstract, insubstantial fabric. Thus, the ancient dispute between several Greek schools arises once again in our time. While for Ionic philosophers the most important issue consisted in discovering the corporeal substance of the world, for the Platonic and Pythagorean schools the key was to be found in patterns and orders. The science of today essentially moves along this second line of thought.

The most fundamental statement of the Pythagoreans was that numbers constitute the unmovable principle of the world; the very essence of reality. When they discovered that the proportions among musical

harmonics could be expressed in a simple and exact form, they considered that the cosmos itself was a harmonious system of numerical reasoning: all reality could be expressed by means of relationships among numbers. According to the Pythagoreans, the inherent numerical order of sounds was directly related with the very organization of the universe. For them, music was therefore nothing other than the expression of the inner relationships of the cosmos. They even affirmed that all material manifestation was the result of the concert of universal vibrations.

At the beginning of 20th century, physicists were confused on discovering that, far from presenting itself as predicted as a continuous flow, the energy emitted or absorbed by atoms presents itself in a quantifiable way, in very precise packages. For several decades, they tried to explain this strange phenomenon by seeking a sound new mathematical theory for the atom that would generate these quantum numbers in a natural way. The solution arrived with the proposition of the similarity between the world of electrons and that of musical harmonics —standing waves—, thereby happily giving rise to the surprisingly precise wave equation as the fundamental piece of revolutionary Quantum Physics. It thus seems that we are literally made of music, that we are pure abstract relationships in an unsubstantial reality, the acoustic appearance of the quantum void, the silent music and the sonorous solitude that amazed our mystics so much.

Standing waves are known by anyone that has played a musical instrument. The main feature of these waves is that they divide the vibrating element —string, tube or hoop— into completely equal sections. A guitar string, for example, cannot vibrate randomly —due to the fact that it has fixed ends and therefore has to vibrate in such a way that its ends remain motionless. This is what limits its possible variations and introduces whole numbers. The string can undulate as a whole (see Fig. 1-A), in two parts (see Fig. 1-B), in three (see Fig. 1-C), in four, or in some other whole number of equal parts, but it cannot vibrate, for example, in three and a half parts or in five and a quarter.

In music theory, these successive standing waves are called “harmonic sounds” or “harmonics”. The unlimited series of these harmonics, originating from the “fundamental sound” of the complete original unity, define the varying degrees of the sonorous vibrations very precisely, i.e. the entire hierarchy of the levels of stability of the flow of music.

We thus see that both in the microscopic world of Quantum Physics and in the macroscopic reality of musical instruments, the “energies” —vibrations— do not occur continuously, but in a quantified way according to a hierarchy of standing waves. At any level of reality, a vibrating element —atoms or guitar strings— intrinsically possesses very precise potential levels within which the flows of energy are stabilized.

We stated previously that the new science considers the universe in a holistic way; in other words, that it perceives nature as an integrated wholeness, as a non-fragmented, undivided overall movement. We have also seen how the evolutionary dynamics of this *unified universe* displays its novelties in a discontinuous manner; just as the deepest transformations of evolution come about suddenly and abruptly. This generates a progressively more complex and more inclusive *hierarchy of organization levels*. We find, once again, a *vibrating element* —the evolving universe— that channels its energy flow in a highly defined series of *levels of stability*. Like atoms. Like musical instruments.

Both in the world of atomic physics as in the world of music, the secret of their sudden leaps and discontinuities in sound was revealed thanks to standing waves and musical harmonics. Could not the same occur in the field of evolution? Does it not sound very coherent that this unified universe that we are starting to discover generates similar creative patterns at its different levels of organization? Does it not therefore sound appealing that the sudden evolutionary changes in the history of the universe respond precisely to these same standing waves that are the explanatory key of both the subatomic and musical world? This has been the basic intuition that has given rise to our hypothesis regarding the rhythm of evolution which we will now summarize below.

FIGURE 1-A

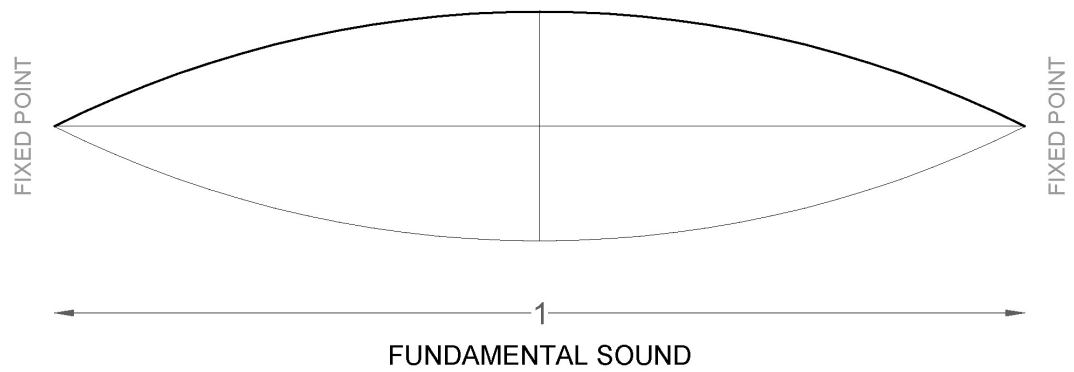


FIGURE 1-B

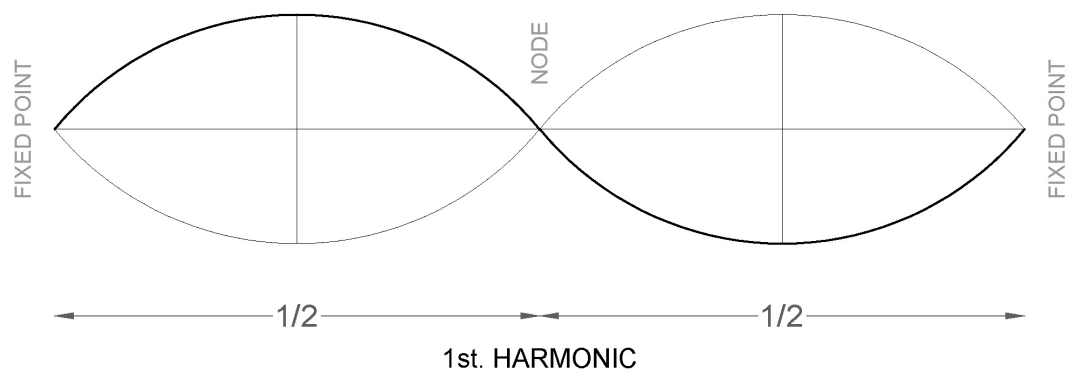
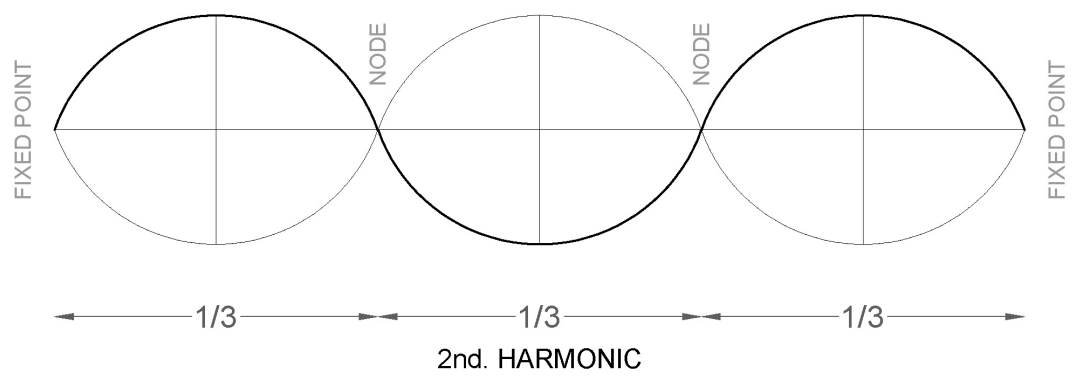


FIGURE 1-C



## **Presentation of the hypothesis.**

Jacob Bronowski has posited a theory regarding a unique process that explains hierarchically ordered diversity without any recourse to reductionism. This theory suggests, as a general cosmologic principle, the concept of the “stratified stability of potential levels” as the key to understanding the evolution of systems in disequilibrium. It basically suggests the existence of specific levels of stability around which energy streams gather and are organized, thereby permitting the subsequent and sudden upward leaps toward new layers or levels of progressively greater complexity. Our hypothesis constitutes a very precise specification in this appealing approach. Let us examine it in greater detail.

Taking the example once again of the guitar string, let us imagine that the guitar is tuned to C —the fundamental sound. If we make half of its length vibrate —the first harmonic—, we will obtain the same original note in a higher octave. If we induce the vibration in a third of the string —the second harmonic— we will get a *different* note, which in this case will be G. This means that a tonal novelty emerges with the second harmonic. Taking the new note as a fundamental sound, we can likewise iterate the experience as many times as we wish and we will always obtain successive scaled sound novelties with each second harmonic. Thus, when we induce the vibration of a third of the length of the string, a creative leap will appear and with a third of the third, another one, and with a third of the third of the third, another new one, and so on.

This simple fact provides the key to our hypothesis. The proposal is very simple: considering the totality of time as a vibratory element —see Figs. 2—, the consecutive linked second harmonics, i.e. the successive thirds of the duration, will mark the emergence of evolutionary novelties. In other words, the second harmonics will define the “potential levels of stratified stability” through which nature’s creativity channels itself or the steps in the ladder of evolution through which the energy streams flow in their ascending process of creation of progressively more complex and conscious organisms.

Figs. 2 show the overall process in graphic form. If we take the entire course of time—from the “origin” to the “end”— as the fundamental sound, we have sketched the consecutive leaps in level in both directions: in Fig. 2-B, the section from the origin to the second node “P” of exteriorization, called the “exit” or “outwards” section; and in Fig. 2-A, the section from that same second node until the end —the “return” or “inwards” section. Fig. 2-C shows the joint trajectory, the overall ladder of evolution.

Summarizing our approach, we could say that, just like when a musical instrument emits a specific note, a wide range of its harmonics sound simultaneously, the universe as a whole likewise has, from its first original vibratory instant, a complete potential hierarchy of standing waves through which its creative flows can ascend. According to our scheme, starting out from the precise vibration that gave rise to the origin to the universe, the universal process commenced with a vertiginous explosion of creativity and leaps in level, gradually slowing down its rhythm on its ascending path toward a specific layer of the spectrum —“the fundamental sound”—, and from there on starts to progressively accelerate the rhythm of its leaps in novelty once again. And so on along the ascending path towards an unstoppable one-time vibration bringing infinite creativity to an end. Later on, we shall consider the profound meaning of these surprising poles: origin and end —Alpha & Omega—, as it is precisely there where we shall find the key to many of our questions.

Finally, in order to provide a coherent and ordered framework for our musical proposal of evolutionary rhythms, we shall now present another observation.

As stated earlier, if we tune a guitar string to C, its second harmonic —1/3 of its length— will be a G. Similarly, the second harmonic of this G will be a D. And that of this D will be an A. If we repeat the same operation indefinitely, over and over again, we will obtain a chain of sounds —C, G, D, A, E, B, F#, C#, G#...—, that exactly reproduce the order of the “sharp tones”. If we consider each note in this chain to

FIGURE 2-A

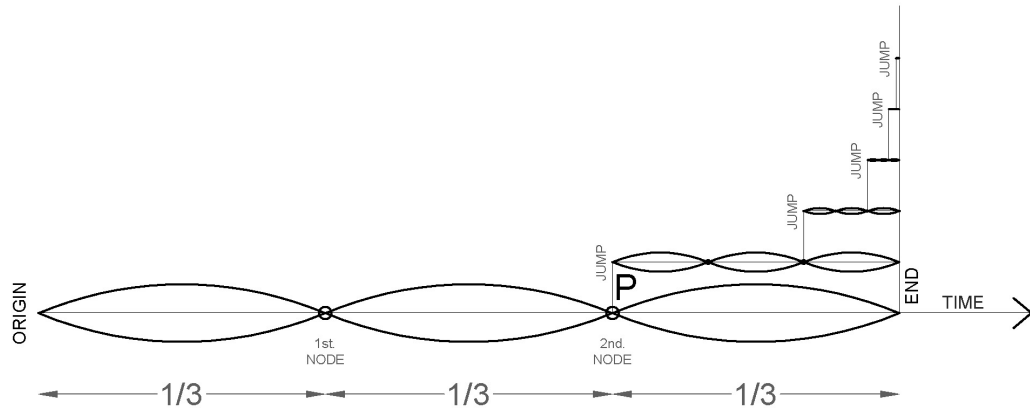


FIGURE 2-B

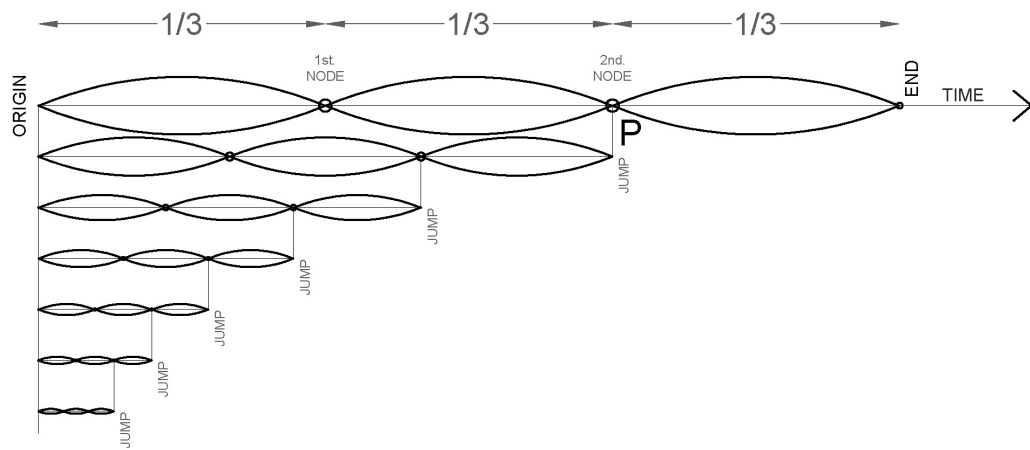
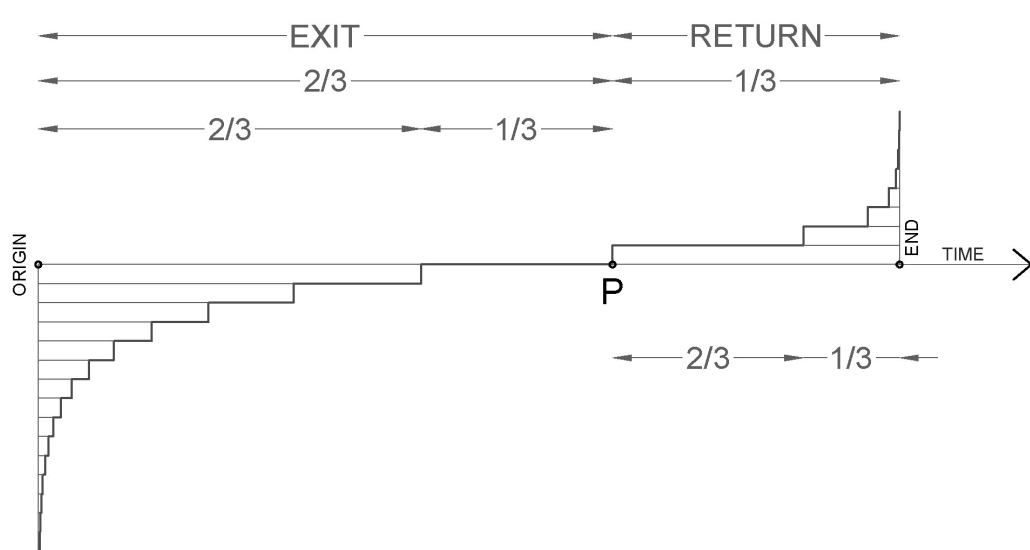


FIGURE 2-C



constitute the characteristic sound of a determined “cycle”, we will thus obtain, with each  $1/3$  of the duration, a completely new sound and therefore a “leap in cycle”. Figure 3-A presents the successive fundamental sounds with their corresponding harmonics, while Fig. 3-B shows the order in which these sounds emerge, without taking in account the scale at which they appear. As we can see, after every seven cycles, the same series of notes is repeated in a higher semi-tone. We shall therefore use the term “series” to refer to each one of the subsequent groups of seven cycles that keep on appearing, and “series leap” to refer to the transitions between them.

Our entire hypothesis of evolutionary rhythms can be reduced to what we have just presented. Just that. As simple as that: a “cyclic leap” appears with each third of the duration, and after seven cyclic leaps a “series leap” appears. It is truly amazing for such a simple scheme to provide such adjustment good fit to the all the key steps of evolution, both in the global macrocosm —paleontological, anthropological and historical— as in the human microcosm —embryological and psychological. I am certain, dear reader, that after examining the test of the hypothesis that we are about to carry out below, you will be convinced that there is, in fact, some hidden secret and you will be even more surprised that no one has recognized this evident, clamorous scheduled rhythm of events. One cannot see the woods for the trees. Get ready!

### **Verification of the hypothesis in the macrocosm**

After having introduced our theoretical framework of rhythms of “cycles” and “series”, we shall now test whether such a “periodic table” fits the data that science presently offers.

Before starting, we would like to point out that the graphs we shall be using are of two types: rectilinear — Fig. 4-A—, in which you will see the evolutionary ladder corresponding to each series; and circular —Fig. 4-B—, in which each cycle is detailed independently. This will enable us to observe the multiple correspondences among them. However, let us not forget that they are simply two different ways of expressing the same data.

Each cycle begins with the emergence of an evolutionary novelty —the “seed”— that transcends the model of the previous cycle. This seed begins to develop on the way to the first node of the cycle, fundamentally in the final stretch —which covers approximately 10% of the total duration of the cycle—, in which a first “sketch” appears. This sketch, in turn, displays its potential on the way to the second node, fundamentally in the final section —which also covers approximately another 10% of the total duration—, in which the characteristic model of the cycle reaches “maturity”. It is precisely at this summit of the second node that an evolutionary novelty emerges that transcends this model and gives rise to a new cycle

For enthusiasts of the new evolutionary sciences, we would say that these second nodes of each cycle correspond to moments of the “chaos”, “creative unbalance” (I. Prigogine) or “beneficial catastrophes” (R. Thom), in which leaps in level or “bifurcations” occur. At these points, the “attractors” defining the previously expressed pattern disappear and those that define a new state subsequently appear “out of the blue”. Abruptly, the fundamental sound changes to its second harmonic.

Knowing that each cycle has a duration of  $1/3$  with respect to the previous one and that each series of seven cycles is therefore  $3^7$  times shorter than the previous one, it suffices to know the dates of some key events in the history of evolution to start “focusing” our theoretical framework on actual facts.

We know that the Big Bang, the seed of the universe, started some 13,500 million years ago, that following the formation of the Earth organic macromolecules, the seed of life, appeared more than 4.500 million years ago ( $1/3$  of the duration of the universe) and that the emergence of the first human being —*Homo habilis*—, the seed of self-awareness, occurred little more than 2 million years ago (a period in time  $3^7$  (=2.187) times shorter than that of all life).

FIGURE 3-A

	1st. SERIES							2nd. SERIES		
	1st.	2 nd.	3 rd.	4 th.	5 th.	6 th.	7 th.	1st.	2nd.	...
FUNDAMENTAL SOUND	C	G	D	A	E	B	F#	C#	G#	...
1ST. HARMONIC	C	G	D	A	E	B	F#	C#	G#	...
2ND. HARMONIC	G	D	A	E	B	F#	C#	G#	D#	...

FIGURE 3-B

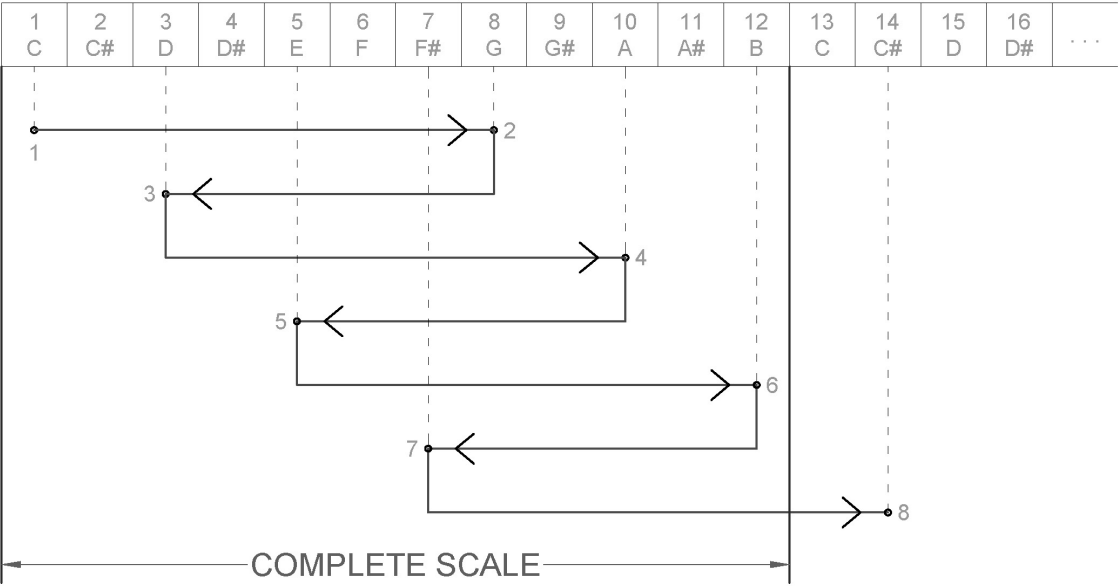


FIGURE 4-A

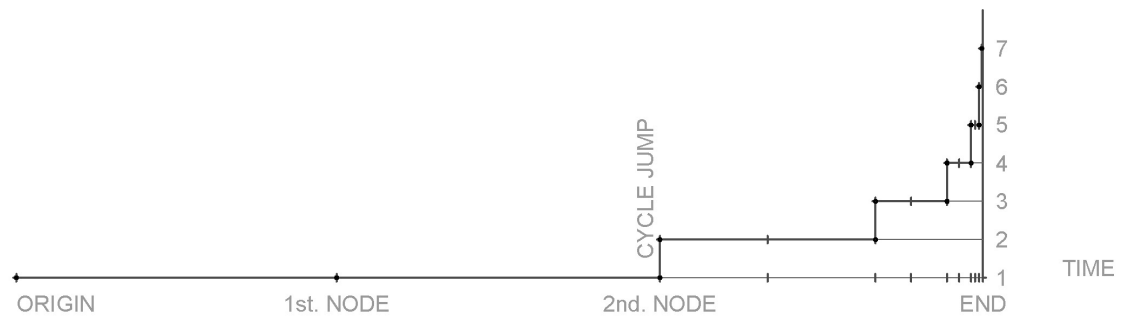
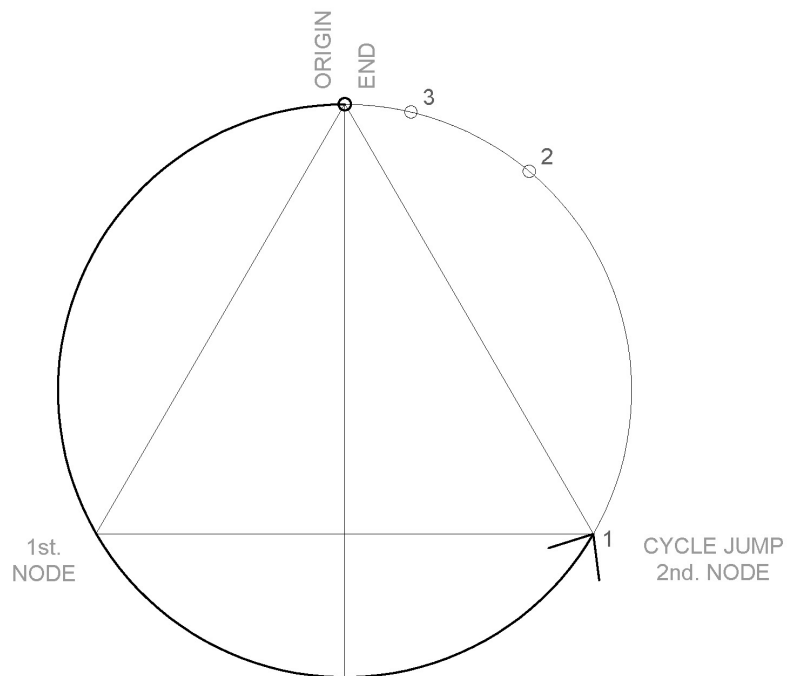


FIGURE 4-B



Placing the Big Bang, then, as the origin of the overall course of evolution and the formation of the Earth as the second node of this course, we shall call—as in Fig. 2-C—the path travelled between both points—from the potential energy of the original void to the formation of complex material—the “exit” process and the entire evolutionary unfolding of all life from then on the “return” process.

We shall now examine precisely this “return” section in greater detail. However, before doing so, we would like to remind the reader that one of the fundamental problems of the classic theory of evolution consists in explaining the marked discontinuities observed between the main taxonomic groups. Our scheme of rhythms, on the other hand, specifically marks the emerging moments of the subsequent taxonomical degrees of the phylogenetic process of human beings with extreme accuracy: **Kingdom:** Animal, in the first cycle, **Phylum:** Chordate, in the second cycle, **Class:** Mammal, in the third cycle, **Order:** Primate, in the fourth cycle, (**Superfamily:** Hominoid, in the fifth cycle), **Family:** Hominid in the sixth cycle; and finally, **Genus:** Homo, in the seventh cycle!!! Let us look into this in detail step by step. I suggest that the reader switches between looking at Figs. 5 & 6 and reading the text.

The first cycle (A-1) of the return evolutionary process begins in the precise moment of the emergence of organic macromolecules, after the formation of the Earth and the rest of our solar system. In the course of evolution approached the first node (approx. 3.000 million years ago), prokaryotic cells—cells without a nucleus—began to form, the same occurring with eukaryotic cells—cells with nucleus—on approaching the second node (approx. 1.500 million years ago). It is precisely then when the first of the aforementioned major taxonomic bifurcations takes place, between the Plant and Animal **Kingdoms**, with the emergence of differentiation between *autotrophic eukaryotic* cells with cellulosic cell walls, many of which contained chlorophyll—plants—, and *heterotrophic eukaryotic* cells with only a fine plasmatic membrane never containing chlorophyll—animals—. There is then a leap in cycle.

The second cycle (A-2) then starts with the formation of eukaryotic cells. The first multi-cellular organisms begin to emerge around the first node (approx. 1.000 million years ago), developing their integration at the beginning of the Primary Era with the rapid expansion of marine invertebrates, giving rise to the first vertebrates—fish—when reaching the second node (approx. 500 million years ago). It is exactly in the ascent towards this second node—as foreseen by our scheme of evolutionary rhythms—when the explosive and surprising appearance of all the animal **Fila**—types—takes place, with our chordate ancestors last of all, giving rise to the first vertebrate fish. New change in cycle.

We would like to point out here that classical paleontologists, when analyzing the fossil remains in the consecutive layers of sedimentary rocks, found some clearly delineated borders in which there existed a sudden change in the nature of the actual fossils. Based on such findings, they established the major Eras in Earth's History: the Primary Era or Paleozoic; the Secondary or Mesozoic; and the Tertiary or Cenozoic. Progressive oxygenation of Earth's atmosphere during the Precambrian period led to the death of many organisms. At the same time, however, it enabled others to use this new energy source to develop suddenly, in novel and diversified ways at the beginning of the Primary Era, during the so-called “Cambrian explosion” or “zoological Big Bang”. This Primary Era ended with the massive extinction of the Permian period, in which almost 95% of all existing species were annihilated. This fact facilitated the major expansion of reptiles and the emergence of primitive mammals at the beginning of the Secondary Era. This Secondary Era also ended with the major extinction of the Cretaceous Period, which led to the disappearance of dinosaurs and permitted the great expansion of the modern placentals at the start of the Tertiary Era. These three expansive processes, with which the three major Eras of Earth history begin, occur as the course of evolution approaches the second nodes in cycles A-2, A-3, A-4, respectively. Let us continue.

Referring back to the description of these cycles, we will say that the third (A-3) starts, as we saw previously, with the formation of the first vertebrate fish. On the path toward the first node (approx. 330 million year ago), we find that amphibians start to conquer dry land, an undertaking which, with the

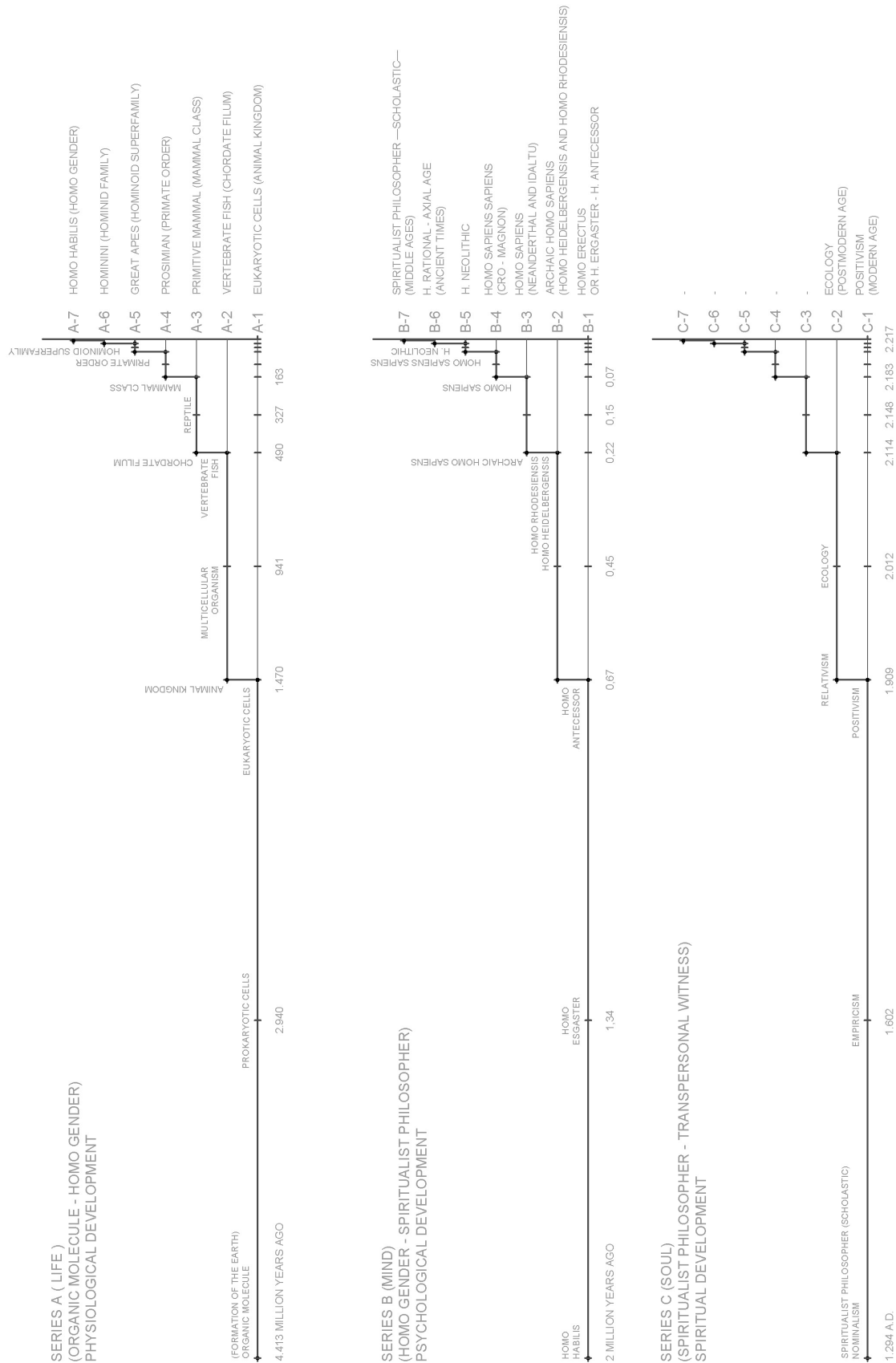


FIGURE 5

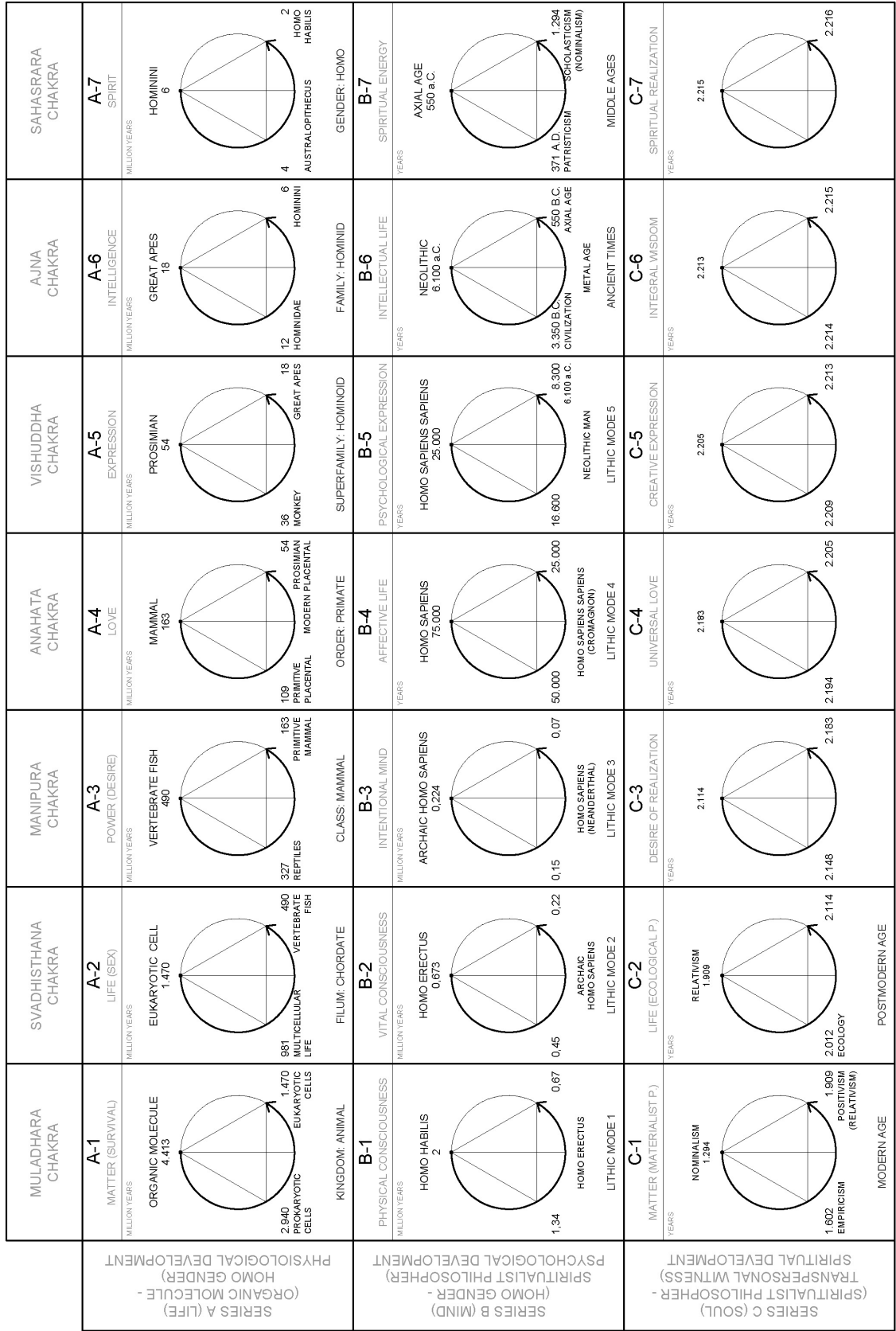


FIGURE 6

beginning of the Secondary Era, was finally completed by reptiles in their peak of development as the course of evolution approached the second node (approx. 165 million years ago). During the same period, primitive mammals started to emerge which —precisely— constitute the third basic taxonomic bifurcation —**Class**— of human phylogeny. Change in cycle.

The fourth cycle (A-4), which starts with the appearance of mammals, has its first node (approx. 110 million years ago) at the moment when primitive placentals —insectivorous— appeared, which developed in a radiant and explosive way at the start of the Tertiary Era with the modern placentals —pro-simians— on approaching the second node (approx. 54 million years ago). It is —once more— during the ascent towards the second node when the appearance of the primate **Order** takes place, defining a new basic level in our phylogenic journey. Leap in cycle.

The fifth cycle (A-5), which commences with the deployment of modern placental mammals, has its first node (36 million years ago) when actual monkeys —*aegyptopithecus*— appear. These were to develop when evolution approached the second node (18 million years ago) with the emergence of hominoids, which constitute the **Superfamily** of human phylogeny. Yet another change in cycle.

The sixth cycle (A-6) starts with hominoids, has its first node (12 million years ago) when the common ancestor of all the great apes —Hominidae— developed, and its second node (6 million years ago) when our ancestors separated from the chimpanzees, our last relatives of the **Family** of hominids, the new basic level of our phylogeny.

The seventh cycle (A-7) thus begins with the appearance of hominids. In the approach to its first node (4 million years ago), we find *Australopithecus anamensis*, which already showed biped locomotion, while on the ascent toward the second node (2 million years ago) *Homo habilis* comes into play, who starts to make rustic stone tools and inaugurates the category of **Genus** —Homo— in our own phylogeny.

We have now travelled through the course of the first series (A) of our pattern of rhythms, and as stated, with the arrival of the second nodes in each cycle —seven in all— the totality of all the basic taxonomic levels of our species have appeared one after the other. That is, we have discovered the major successive somatic transformations that our ancestors experienced. However, evolution continues unfolding and we shall now present a new series (B), which will reveal step-by-step the different stages that human beings have already covered in their way to modernity. Moreover, starting out from the generally accepted system in international archaeology proposed by Grahame Clark, we shall see how the successive lithic industries developed by our ancestors display the rhythm of our cycles precisely. Thus, “technical mode 1” (Oldowan) and its very long transition to mature Acheulean are developed in our cycle B-1; “technical mode 2” (full Acheulean), in our cycle B-2; “technical mode 3” (Mousterian), in our cycle B-3; “technical mode 4” (upper Palaeolithic), in our cycle B-4; and “technical mode 5” (Mesolithic), in our cycle B-5. As can be seen, the avalanche of linked “coincidences” continues!

We wish to make a brief parenthesis here to recognize that the accelerated pattern we observe in the generation of successive lithic modes was highlighted some time ago by French geologist André de Cayeux. In an article entitled *Quelle courbe suit l'Humanité?*, he drew a graph that clearly revealed the “vertiginous acceleration” of the evolutionary process of human beings. The stages he proposed were precisely “initial lithic culture”, “Acheulean”, “Mousterian”, “Aurignacian”, “Mesolithic”, “Age of Metals”, “Age of Machinism” and “Atomic Age”, in almost complete harmony with the cycles of our hypothesis.

Returning now to the testing of our hypothesis, we began the second series with the first cycle (B-1) which starts, as stated, with the presence of *Homo habilis*. According to the traditional approach, we could say that as we approach the first node (1.3 million years ago), we would encounter the emergence of *Homo erectus*, who would be the sole leading figure in this cycle with its expansion and development toward the second node (0.6 million years ago). A more recent approach seems to point in another direction as

regards our line of ancestors. *Homo ergaster* —one of the first specimens of African *Homo erectus*—, would actually be the one that was to evolve toward *Homo antecessor* in the ascent towards the second node in this cycle.

The second cycle (B-2) would hence start with the presence of *Homo antecessor*, who on the ascent towards the first node (0.45 million years ago) was to derive in Europe towards *Homo heidelbergensis* and in Africa towards *Homo rhodesiensis*, both considered in traditional terminology as *archaic Homo sapiens*. They were to develop on the path to the second node (0.22 million years ago) in their own respective areas. Change in cycle.

The third cycle (B-3), would then commence with the presence of the two branches of *archaic Homo sapiens*. In Europe, *Homo heidelbergensis* was to evolve towards *Homo sapiens neanderthalensis* on approaching the first node (around 150,000 years ago), while in Africa, *Homo rhodesiensis* was to evolve towards *Homo sapiens idaltu*, sometimes known as “protomodern” man because it already has all the characteristics of our species. Both branches were developing a type of lithic industry very similar to the one in Mode 3 —Mousterian— on the path towards the second node (around 75,000 years ago). Leap in cycle.

The fourth cycle (B-4) thus commences with the presence of the two branches of *Homo sapiens* living independently. However, as the course of evolution approaches the first node (around 50,000 years ago), the African species was to migrate toward Europe and, after a period of coexistence, Neanderthal man would end up disappearing, while *Homo sapiens sapiens* or Cro-Magnon would keep on developing, creating a Mode 4 —Aurignacian— technology on the path toward the second node (around 25,000 years ago), a point at which it was now the only species of the genus *Homo* on Earth. Change in cycle.

We shall make a pause here in our description of the cycles of this series B in order to explain that, from this time on, evolution will not be expressed biologically, that is to say via anatomic and physiological transformations, but rather that the cyclic leaps will basically be expressed through psychological and socio-cultural changes. In order to leave it very clear that the leaps we shall discuss below fit perfectly en bloc to historical data, we reproduce a few paragraphs from Ervin Laszlo's book *Evolution: The Grand Synthesis*:

“In the span encompassed by Paleolithic societies on the one end and modern information-based societies on the other, an entire succession of societal forms has unfolded. The nomadic tribes of the Paleolithic transformed into the settled villages of the Neolithic; these in turn gave way to archaic empires and to local kingdoms and city-states. The classical empires were followed by medieval princedoms, and these yielded to the rise of nation-states, some with vast colonies. Today the colonies have disappeared, and modern nation-states have spread to the four corners of the world.

With attention to both the technological and the social factors we can perceive a series of dynamic transformations in the development of societies. Nomadic hunting-gathering tribes domesticate plants and animals and transform into settled agrarian-pastoral societies; agrarian-pastoral societies evolve such technologies as irrigation and crop rotation and transform into agricultural ones; agricultural societies develop handicrafts and simple manufacturing technologies and thus transform into industrial societies; and industrial societies, under the impact of new, mainly information- and communication-oriented technologies, evolve into postindustrial societies.

History's arrow of time does not fly smoothly. Although the historical record is always complex and frequently obscure, it gives good reasons to believe that societies, the same as biological species, do not change at all times and in small increments. Rather, the mode of change appears saltatory and intermittent...”

I suggest, dear reader, that you be prepared for new surprises, because all of these stages proposed by Erwin Lazlo —which match the traditional classification of: **Upper Paleolithic, Neolithic, Ancient Times, Middle Ages, Modern Age** and **Postmodern Age** (in which we are really entering nowadays)— do fit, with utter precision, to each and every one of the anticipated cycles of our hypothesis of evolutionary rhythms! Let us verify this.

Remember that we had left our test in the fourth cycle (B-4) of the second series, with the development of Cro-Magnon, a cycle that corresponds to the stage of nomadic tribes of the Upper Paleolithic as well as hunting-gatherer societies.

During the fifth cycle (B-5), which commences with Cro-Magnon, we find near the first node (just over 16,000 years ago) an increase in gathering and the expansion of humanity. This was to lead, close to the second node (just over 8,000 years ago), to a generalization of **Neolithic** life, with the aforementioned settlements and agro-pastoral mode. A new cycle then commences (around 6,000 years BC).

The sixth cycle (B-6) starts with this Neolithic man. Around the first node (more or less 3,300 years BC), copper metallurgy arose, writing appeared —History *per se*. As we approach the second node (550 BC), the so-called “axial age” of the astounding 6th century BC arose. This was the time of pre-Socratic philosophers, Israel’s prophets, Buddha, Mahavira, the *rishis* of the *Upanishads*, Confucius, Lao Tse and Zarathustra, among others. Between both nodes, archaic empires, kingdoms and state cities developed. In other words, the mode of agricultural life or what is known as the **Ancient Times**. Change in cycle

The seventh cycle (B-7) of this second series starts with the emergence of philosophic man around 550 BC, who places the mythical thinking of the previous cycle in doubt. As the course of evolution approaches the first node (around the 370 AD), we see the appearance of Patristic philosophy in the Western tradition. This philosophy was fully developed as the second node approached (around the 1295 AD) with Scholastic philosophy. This cycle is the one that has been called the **Middle Ages**, with all its special features: princedoms and pre-industrial modes of life. With the appearance of Nominalism and the pre-Renaissance, still in this same second node, the abstract and metaphysical rationality of the medieval world was transformed into concrete and empirical rationality of the Modern world. And with the crisis, a new cycle appears. A new series: C.

The first cycle (C-1) of this new series thus commences with the nominalist-scholastic crisis that was to be the seed that germinated autonomously in Western culture, but was eventually to end up transforming the life of all human beings on the planet. Close to the first node (around the year 1600), mechanistic empiricism started to appear, developing to its fullest as the course of evolution approached the second node (around the year 1910) when Positivist Science was at its peak. The features of this cycle coincide with those of the **Modern Age**, the forming of states and the industrial way of life. At this point, the same crisis of the previous paradigm arose; on this occasion, the theories of relativity and quantum mechanics were the ones that were to stick the knife in the limitations of the mechanistic viewpoint. Change in cycle.

The second cycle (C-2) thus commences with Planck and Einstein and is not to have its first node until 2012. The new **Postmodern**, environmental, relativistic and pluralistic paradigm is thus in course. You are invited to take part!

If all of the basic steps of Evolution, from the formation of the Earth up to now, have fitted the projected rhythm in our “periodic table” with utter precision, we may presume that it will keep on doing so in the future. If this is so, an accelerated process of transformations will be experienced over the next two centuries that will dramatically conclude around 2217, in a moment of infinite creativity. Tell your great-great-grandchildren to start getting ready.

## Regarding the chakras

Up to this point, we have presented our own verification of the hypothesis, basically with the data provided by Western science, which, for four centuries, has painstakingly studied the world of “outer” forms. It may be useful, however, to also take in account the observations that Eastern traditions have made which, for close to three millennia of the world of “inner” forms. Because evolution, as we stated at first, does not only keep on generating progressively more complex, more organized structures of energy and matter, but also keeps on unfolding deeper and more lucid levels of consciousness, simultaneously.

In this regard, the three series of cycles that we have been analyzing so far could be approached as follows. With the emergence of life in cycle A-1, consciousness, which up to this cycle was absorbed in matter, takes an inward leap, being identified with an incipient living organism —with a “subject”— that, on perceiving its environment full of “objects”, can act upon it and manipulate it in its own benefit. All of the first A series can be understood as a steady maturation of its capacity to act and perceive. With the emergence of the first human individual, in cycle B-1 of the second series, the conscious subject that already perceived the environment with great precision, takes a new inward leap and starts to perceive itself as an individual separate from the environment. This is the surprising phenomenon of self-awareness, the “original sin” of the biblical story, the expulsion of human beings from the “paradise” of non-awareness. The entire second series concludes with the emergence of rationality in the “axial age” with a new leap toward consciousness, thus enabling the mind to think about itself and the discovery of the magic of self-reflexivity. The new series —C—, that then commences will lead —according to our hypothesis— toward a major evolutionary peak in the year 2217, in which humanity in general will reach the state of “transpersonal Witness”. In this state, there will only remain a subtle form of dualism between the observer and that which is observed; a dualism that will finally disintegrate on discovering that both —the observer and the observed— are in fact one and the same thing and that they had never actually been separate.

As we stated previously, the Eastern mystic traditions have painstakingly delved into these deeper areas of consciousness, and have described their findings in great detail. Thus, the millenary Psychophysiology of the Hindus and in most especially, the Tantric tradition, has conscientiously studied the energy structures within human being and the universe. They claim that the flow of energy —*prana*— circulates through channels —*nadis*— and accumulates in vortices —*chakras*— constituting veritable storage batteries, transformers and distributors of this energy. Each one of these chakras is related to a nervous plexus and an endocrine gland. They therefore act as contact points between the physical body and the subtle structures, having specific psychological and spiritual functions. They claim that there are seven *chakras* distributed between the base of the spinal column and the top of the head and that they differ according to their different sound vibrations and characteristic activities: *Muladhara* (matter), *Svadhista* (life and sex), *Manipura* (power and desire), *Anahata* (love), *Vishuddha* (expression), *Ajna* (intelligence-mind) and *Sahasrara* (soul-spirit).

As we can see, Hindu Psychophysiology presents a wide spectrum of seven levels of energy stabilization that manifest in at least three different wrappings: biological, psychological and spiritual. As this evidently sounds very similar to what we have described in our scheme of rhythms —seven cycles in three subsequent series—, we shall now investigate whether the characteristics that define each of the *chakras* have any correspondence with the evolutionary cycles that we have previously described. Should there be considerable points in common between both approaches, we may find that not only the “rhythm” of evolutionary cycles is defined from the beginning, but also the characteristic content —the “sound”— of each one of them! Who mentioned chance?

At the top of Fig. 6, we have noted the complete series of the seven *chakras* in parallel with series A, B and C of the seven cycles of our hypothesis. In the case of our suspicion of correspondence between both approaches—that of the *chakras* and that of evolutionary stages— being correct, all of the correlative

cycles of the different series—for example cycles A-5, B-5 and C-5—, should develop a common theme. Let us see.

The first *chakra*, *Muladhara*, is the basic center and sustainer of life, representing the domain of simple sensations and perceptions that belong to the material and physical world. It is related to the instincts of individual safety and survival, without which no life could exist. Its most characteristic behavior pattern is the simple stimulus and response. All of this perfectly matches unicellular life in our first cycle (A-1), which, let us recall, spans the appearance of organic macromolecules after the formation of the Earth right up to the emergence of eukaryote cells.

The second *chakra*, *Svadhista*, is related to sexuality, the conservation of the species and the propagation of life; relationships between organisms now take on significant importance. All of this is evidently in tune with our second cycle (A-2), which commenced with eukaryote cells, generated the first multi-cellular organisms, gave rise to sexual reproduction and deployed all its vital potential following the Cambrian explosion—the “zoological Big Bang”.

The third *chakra*, *Manipura*, is associated with power, will, desire and intentionality; the basic theme of this center is the fight for power, competing, ambition and domination. The third cycle (A-3) of this first series, let us recall, ended with the dominating expansion of the dinosaurs, in utter consonance with this *chakra*.

The fourth *chakra*, *Anahata*, is linked to love, compassion, affection and commitment; here rivalry gives way to cooperation and unconditional service. It is the center of the heart, the motherly instinct. All of this fully links to our A-4 cycle, which commenced with the emergence of primitive mammals and birds—of which it has been said that, because they are the only organisms that take care of their offspring, they are the “inventors” of love and affectivity—and ended with the radiant and explosive emergence of modern placental animals, opening the “age of the mammals”.

The fifth *chakra*, *Vishuddha*, is the effective center of communication, that of expression and self-projection and creative inspiration. It would match our A-5 cycle, which, let us recall, started with the emergence of the pro-simians, saw the development of the great apes and ended with the anthropoids, which, as is well known, possess a great variety and complexity of the modes of expression—language of gestures, sounds, attitudes, movements, facial mimic, and so on—in clear consonance with this fifth *chakra*.

The sixth *chakra*, *Ajna*, the center of intelligence, of knowledge, of wisdom, corresponds to cycle A-6, which, let us recall, encompasses the anthropoids right up to the emergence of the first hominids. As is widely known, besides human beings, all currently living species that still have the same basic features of that evolutionary stage are the animals with the highest intelligence on the planet, in clear consonance with the *chakra* we are talking now discussing.

The opening of the seventh and last *chakra*, *Sahasrara*, means the full flourishing of spiritual potential. It corresponds to the peak cycle, A-7, of the first series, which started with the emergence of hominids and ended with the appearance of *Homo habilis*, the first member of our human race, now entering the new area of self-awareness and evidently corresponding to this *chakra* of the “thousand petals”.

We have thus covered the entire chain of the seven *chakras*, from *Muladhara*—sustaining the material base—to *Sahasrara*—deploying spiritual energy—in total the consonance with our series of cycles, from the organic matter of A-1 up to the self-consciousness of A-7! Could it be that chance does not constitute, by any means, the ultimate criterion for understanding the creative dynamics of the evolutionary process? Let us continue with our investigation.

Within the first cycles of the second series, those relating to the most primitive humans, instead of only “checking” the connections with their correlative *chakras*, we shall simply “suggest” this correspondence.

Later on, when applying our hypothesis of rhythms to the human microcosm and on observing the phylogenetic-ontogenetic parallelisms, we shall have more arguments with which to confirm these correspondences.

It is to be expected that in the first cycle (B-1) of the second series, physical self-awareness would gradually deploy —first with *Homo habilis* and later with *Homo erectus* (or *Homo ergaster*)—, subsequently emerging from merely unconscious fusion with the natural environment. These first human beings would thus have started to perceive their physical body, distinguished from the surrounding environment, and therefore would have been able to act consciously upon it, manipulating it to their own benefit —tools, mastery of fire, and so on. All this is in consonance with the features of the first *chakra*, which, as we stated, represents control over the most basic sensations and perceptions pertaining to the material and physical world.

In the second cycle (B-2), *archaic Homo sapiens* started to become aware of their vital and pranic drives and their motivations would basically revolve around pain-pleasure principles. In that case, this stage would clearly match the “vital” feature of the second *chakra*.

In the third cycle (B-3), the first *H. sapiens* will have deployed the “intentional mind” with the emergence of the wide-ranging capacity to create images, which allows the experiencing of prolonged emotions such as anguish and desire. This would be in consonance with the third *chakra*, which, let us recall, is associated with power, will, desire and intentionality.

The fourth *chakra*, as we said, is linked to love, compassion, affectivity and commitment. Our fourth cycle (B-4) in this second series spanned the period during which the Neanderthals first and Cro-Magnons later took center stage on the European continent. It is then when the nuclear family was given a boost and human beings start to worry about treating their sicknesses and the future of their dead. It is perhaps in this time when language started to develop, allowing the broadening and intensification of human relationships as well as the appearance of the “group mind”. All of this is clearly in agreement with the “affective” features of the *Anahata chakra*.

The fifth *chakra* is associated with communication, psychological expression and creative inspiration, which is fully in consonance with what happened in our cycle B-5, in which modern man —*Homo sapiens sapiens*, deployed all his artistic potential. Poorly developed up until then, Culture exploded in a multitude of facets: in the world of language, in the dazzling and surprising rock art of Altamira and Lascaux, in sculptures such as the Willendorf Venus, in reliefs, in horn and ivory works and so on.

The sixth *chakra*, as we have already stated, is the center of knowledge, intelligence and wisdom. Our sixth cycle (B-6), let us recall, starts with the appearance of Neolithic culture —in which human beings started to understand natural processes and by doing so were able to control and transform them (taming animals, planting seeds and so on)—, and via the development of civilizations, the discovery of the alphabet and the progressive use of metals, reaches the “axial age”, with the emergence of the first philosophers. Its consonance with the *Ajna chakra* is clearly evident.

The opening of the seventh *chakra*, as already mentioned, means the full flourishing of spiritual potential. Our cycle B-7, as we have just seen, starts with the crisis of mythic thinking, as well as with the sudden emergence of the rational thinking in the “axial age”. In Western culture, this process spans Greek philosophy, through Patristic philosophy and up to the Scholastic philosophy at the end of the 13th century. The way of thinking developed in this period was mainly abstract, spiritualized and metaphysical, clearly matching the *Sahasrara chakra*. Simultaneously, this was also the time of the great sages and humanity’s non-dualistic mystics: Buddha, the *rishis* of the *Upanishads*, Lao Tse, Chuang-Tse, Jesus de Nazareth, Nagarjuna, Plotinus, Asanga, Bodhidharma, Hui Neng, Shankara, Huang-Po, Padmasambhava, Al-Hallaj, Ibn-Arabi, Dogen, Rumi, Meister Eckhart and the like. None of them “thought” about an external Divinity,

but “knew by their own embodiment” that their truthful identity was in fact that Divinity. That is why we believe that, although they were in tune with the *Sahasrara chakra*, they better resonated with its expression in the following series —with cycle C-7—, in which humanity in general will discover, like all these sages had done before, that matter and spirit, energy and consciousness, object and subject are in fact non-dual polarized expressions of the unique absolute reality: the simple, ever-present Self-evidence. We shall return to this point later.

We have now concluded the second series, and the correspondence with the chain of the *chakras* has been very clear, from the mere physical awareness of *Homo habilis* through to the metaphysical rationality of the Scholastic philosopher. We shall therefore continue, testing now our third series —C—, at least in the cycle and peak that we have already covered.

The first cycle (C-1) of the third series started with the emergence of Nominalist philosophy, which, due to placing emphasis on the specific, led to a crisis in the metaphysical thinking of the Scholastics. It then continued with all the deployment of empirical science and reached a peak with the materialistic Positivism of the 19th century. All this corresponds fully with the characteristics of the first *chakra*, which represents the physical and material world, as we have seen in previous series.

Allow us now to clarify what we have just been discussing. From the traditional perspective, the materialistic approach is rejected because it is believed to be a step back in relation to metaphysical thinking. However, according to our scheme, modern materialistic empiricism paradoxically represents a step forward in the spiritual process in relation to medieval religious “beliefs”. This is so because while the latter occupied the highest stage in the second series —B—, modern empiricism is situated at the beginning of the third series —C—, which, as it has greater depth and lucidity, is hence more “spiritual”, although its contents may have been only physical so far. In the long term, according to our pattern of rhythms this path will lead not to the “belief” in the world of the Absolute, but rather to “empirical” evidence of our own identity with the Absolute Itself.

As we have just stated, the second cycle (C-2) started with the first years of the 20th century, when the apparently solid mechanistic and materialistic paradigm of the Modern Age started to fracture with the emergence of the Theories of Relativity and Quantum Physics. As opposed to the cold inflexibility, dogmatism and linear logic of the previous cycle, the new approach introduces reticular logic, perspectivism, environmental awareness, indetermination, pluralistic relativism, multiculturalism, respect and care for mother Earth, Gaia and life itself. The Postmodern Age that is starting is clearly in consonance with the second *chakra*, the focus of which, let us recall, is the conservation and promotion of life.

Summing up: the pattern of rhythms we have proposed fully matches both in rhythm and content, the empirical data from the sciences of Evolution and History. The first sixteen cycles of our “Evolutionary periodic table” coincide with utter precision with the totality of the stages that have occurred so far. It is obvious that the five remaining cycles of this third series —C—, will also mark the pattern of the accelerating process that will lead humanity towards the great evolutionary Peak in a couple of centuries, around the year 2217. The cycle of “ecological” content in which we are immersed right now, C-2, will reach its zenith within a century, around the year 2114. The following cycle, C-3, the focus of which will be the “desire for realization” will span the period up to 2183. Next, cycle C-4, whose central theme will be “universal love”, will reach its peak at the beginning of the 23rd century, around the year 2205. Cycle C-5, the focus of which will be “creative expression”, will develop through to the year 2213. The “integral wisdom” of cycle C-6 will reach its apogee in the year 2215. Finally, humanity’s “spiritual realization” will take place around 2217.

## Regarding phylogenetic-ontogenetic parallelism

We start out from the classical idea, present in very different cultures, that the human organism encapsulates everything; it constitutes an individual concentration of the world, a unity that reflects, as in a mirror, the totality of the universe. According to this approach, human development is a rapid recapitulation and integration of all the levels gradually deployed within the evolutionary process of the universe throughout its slow, drawn-out paleontological development.

Haeckel's major contribution to the theory of evolution is what he called "the law of fundamental Biogenetics", i.e., the parallelism between the growth of the individual embryo and the development of the species to which it belongs: "ontogeny, that is, the growth of an individual, is a short and fast repetition (a recapitulation) of the phylogeny or evolution of the lineage to which the individual belongs". This means that during the course of individual development, the organism recapitulates its own evolutionary lineage so that the diverse forms which the embryo passes through represent the predecessors of such an organism. Note, however, that this is not a repetition of adult forms of these predecessors; it is their embryonic and developmental stages that are reproduced. This is why organisms which are close in the evolutionary scale—those that had a common descent until very recent periods—have similar embryos in their initial phases of gestation. It is only during the latter stages when differences become evident. In other words, because ontogeny reproduces phylogeny, the embryonic development of historically related animals passes through similar transformative processes which are longer lasting, the closer the degree of kinship. Darwin himself wrote in his *Origin of the Species* "community in embryonic structure reveals community of descent".

In 1828, Karl von Baer, the major embryologist of his time, exclaimed, "I have two small embryos both kept in alcohol and I forgot to label them. Now I'm not able to distinguish their genus. They could be lizards, small birds or even mammals". This is because all embryos from the chordate *phylum*—fish, amphibians, reptiles, birds and mammals—are almost identical during early developmental stages: zygote, blastula, gastrula, etc. Only subsequently do the special characteristic of class, order, family, genus and species start to appear successively.

Given that embryonic development reveals the ancestry of a species, within classic taxonomy—in the classification of living beings—the most reliable criterion for affirming that two species had an immediate common ancestor above and beyond anatomical similarities was the similarity of their ontogenetic pathway. It is for this reason that phylogenic taxonomy—already defined in the 19th century by Haeckel and Sachs—states that the systematic ordering of biological groups represents a schematization of evolutionary stages achieved over the course of time and, indicates the order of appearance of the different organisms that emerged upon the Earth.

It is becoming increasingly clear that evolutionary leaps essentially occur via branching within embryological processes: new pathways of embryonic and larval development separate at some point from the pre-existing ancestral pathways. The innovations responsible for the appearance of new species will thus occur, not only via simple mutation in a small segment of DNA, but through modifications introduced in the process of individual development, i.e., through "heterochronies" or discrepancies in the rhythm of ontogenetic processes. Of special interest within these heterochronies are the processes of "pedomorphosis"—the conservation of ancestral juvenile traits by the following ontogenetic stages of offspring—and also "neotenia"—pedomorphosis produced by retardation of somatic development—. Many of these cases of evolution by means of neotenia are well known, ranging from vertebrates—considered as tunicated neotenic larvae—through to human beings themselves, as proposed by Stephen Jay Gould on observing the clear similarity between the human adult and the young chimpanzee. Thus, the mechanisms of evolution may be due not only to the gradual selection of individual traits, but by these changes in rhythm given rise to profound anatomic modifications while opening up novel ecological possibilities. These sudden changes would also explain the absence of many "intermediate forms" in the fossil registry as these forms would never actually have existed.

In 1922, Grandjean corrected Haeckel's claim that "ontogeny reproduces phylogeny" and proposed a complementary formulation: "ontogeny does not reproduce phylogeny, it creates it", thereby suggesting that these branches in the ontogenetic pathway are precisely the ones that generate the novel leaps in phylogenetic pathways. These same approaches from the world of Biology are similarly repeated in the socio-cultural sphere when addressing the issue of whether anthropological development precedes the evolution of institutions, is a consequence of it, or both.

In line with the theory of "internal logic" in historical development, history is conceived as a self-deployment of inherent categories of humanity from the outset. All organicist approaches defend this approach and understand history as the "history of human life", based on the parallelism between phylogeny and ontogeny. Thus, according to Vico, culture passes through the same phases as the individuals that compose it. Or according to Habermas, the internal logic of the cognitive development of a child serves as an analogy for the self-understanding of communicative rationality throughout human history. Even Marx was also occasionally inclined to work with the theory of internal logic. In the Paris manuscripts, he holds that human beings may only develop the fundamental constitutive elements of the human essence and that progress is thus the unfolding of this essence.

According to our hypothesis, the phylogenetic, historic and macrocosmic processes and the ontogenetic, individual and microcosmic processes are both overall and specific expressions of one and the same unique archetype of rhythms that define the dynamics of exit and return in the manifestation of the universe in time. Thus, both individuals and societies are constrained to progressively updating the successive levels of potential stability of the original matrix.

Returning to the embryologic issue we were discussing and focusing now on human beings, we have to say that, like other animals, human beings pass through the consecutive embryonic stages characteristic of their phylogeny before developing the physiological traits that verify their condition as humans. Their ontogenetic process then becomes much more similar to that of other species; the more so, the closer they are to their evolutionary scale. In the words of evolutionary scholar Francisco J. Ayala, "the human body is built following the same general scheme as other animal bodies, being more similar to anthropoids, primates, mammals and vertebrates in this descending order". As we have seen previously, these stages correspond exactly to the four successive cycles of our hypothesis: A-5, A-4, A-3 and A-2.

Similar to the embryological process, the psychological development of human beings seems to recapitulate the successive perspectives displayed by their ancestors. John C. Eccles states that it may be postulated that all the transitions that are produced ontogenetically when passing from the baby to the child and then to the adult are situated precisely within the phylogenic process of human evolution, "the progressive development from the consciousness of the baby to the self-consciousness in the child provides a good model for the emergent evolution of self-consciousness in the hominids". Likewise, the psychologist Jean Piaget states that the development of thinking in the child shows an intimate conformity with the evolution of consciousness in our species.

Along these same lines, Jung, after recalling Nietzsche words: "in sleeping and dreaming we once again work through the lessons of earlier humanity", added: "the supposition is therefore justified that ontogenesis corresponds in psychology to phylogenesis". Ken Wilber equally states: "The same force that produced human beings from amoebas produces adults from infants. That is, a person's growth, from infancy to adulthood, is simply a microscopic version of cosmic evolution". He likewise affirms: "Very like the geological formation of the earth, psychological development proceeds, stratum by stratum, level by level, stage by stage, with each successive level superimposed upon its predecessor in such a way that it includes but transcends it". Ken Wilber also states: "...there is an increasing reacceptance, among developmental structuralists, of the notion of phylogenetic/ontogenetic parallel: primitive-paleolithic magic is similar in deep structure (not surface structure) to infantile-early childhood preoperational thinking; classic religio-mythic expressions are similar in deep structure to late childhood pre-operational thinking and

beginning concrete operative thinking; and modern rational science is top of the hierarchy with adolescent-to-adult formal operative and hypothetico-deductive reasoning.”

According to Wilber, the overall process of psychological evolution —that is the manner in which cosmic evolution operates in human beings— occurs in a most significant and coherent way. In each stage, there is a higher-level structure —one that is more complex and therefore more unified— which emerges by means of differentiation from the lower-order level that precedes it. This higher-order structure is introduced into consciousness and the self ends up identifying with this emergent structure. As it has differentiated from the preceding structure, the self transcends it and can thus operate on this lower structure using the instruments that the new emerging structure offers.

Ken Wilber denotes by “deep structure” the characteristic manner of any given level —a form that materializes all possibilities and limitations— and by “surface structure”, the specific manifestation of deep structure. All deep structures are undifferentiated, folded or enveloped in the unconscious field. The unconscious substratum is almost completely void of surface structures. This is something similar to Jung’s idea of the archetypes as “forms without content”. In Jung’s words, an archetype (deep structure) “is determined as to its content (surface structure) only when it has become conscious and is therefore filled with the material of conscious experience”. We all inherit the same essential deep structures, but each of us learns our own individual surface structures.

According to Ken Wilber, the fetus has fundamental ground unconscious, “In essence, it is all the deep structures existing as potentials ready to emerge, via remembrance, at some future point.” All deep structures are included or related to ground unconscious: the “archaic unconsciousness” is the past of humanity and the “emerging unconsciousness” is the future. Given that the higher structures embrace the lower ones, the higher ones have to be the last ones in developing. The transpersonal cannot be realized while the personal has not yet been formed. Development —or evolution— consist in a series of hierarchical deployments of deep structures parting from ground unconsciousness, starting from the lowest —matter— and ending with the highest —consciousness. When —and if— the totality of ground unconscious has emerged, then there will only be consciousness; all is consciousness as the Whole. As Aristotle put it, when the potential has been actualized, the only result is God.

### **Verification of the hypothesis in the microcosm**

Having previously verified the validity of our scheme of rhythms in the evolutionary dynamics of the universe —the macrocosm—, we shall now see whether this same scheme is also reflected in the developmental process of individual beings —the microcosm.

Assuming that human beings are in tune with the rhythms of the evolutionary cycles we have previously analyzed, and in the knowledge that, according to the study by Richard M. Bucke, the spontaneous emergence of what he called “cosmic consciousness” takes place around 34 years of age, we shall take cycle C-4, which has a duration of 34.17 years, as the base cycle to proceed with the verification of our hypothesis in the individual development of a fully realized human being.

Applying our overall scheme of rhythms —previously presented in Fig. 2-C— we obtain a first approximation to our proposal about this cycle of 34.17 years of duration as shown in Fig. 7-B. This figure shows the full course of a life, which, starting from the moment of engendering, deploys in a progressively drawn-out way to the “exit” section —or “outward arc”— toward the pole of the “ego”, situated around 22 years of age —matching Wilber’s affirmation that the return process or “inward arc” does not generally start before 21 years of age— and initiates this section of “return”, in a progressively accelerated way now towards the final pole of illumination. In accordance to this scheme, in the “exit” section toward the maturation of “ego” a human being traverses both the complete series A —life— and B —mind— of our

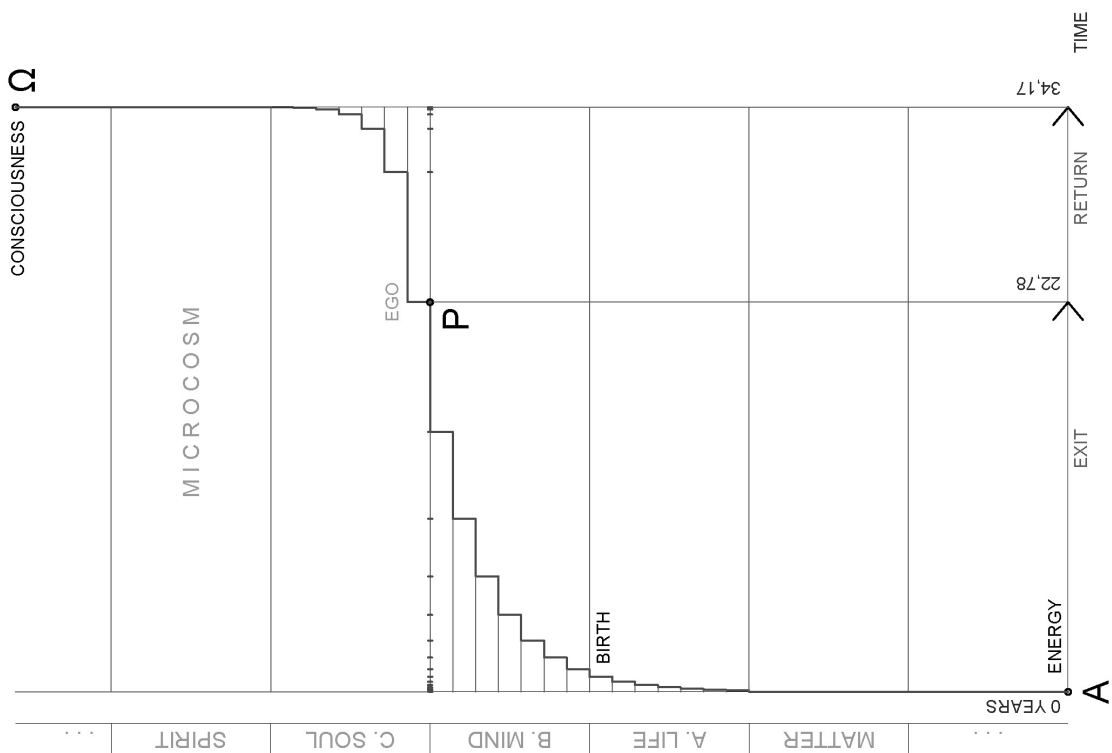


FIGURE 7-B

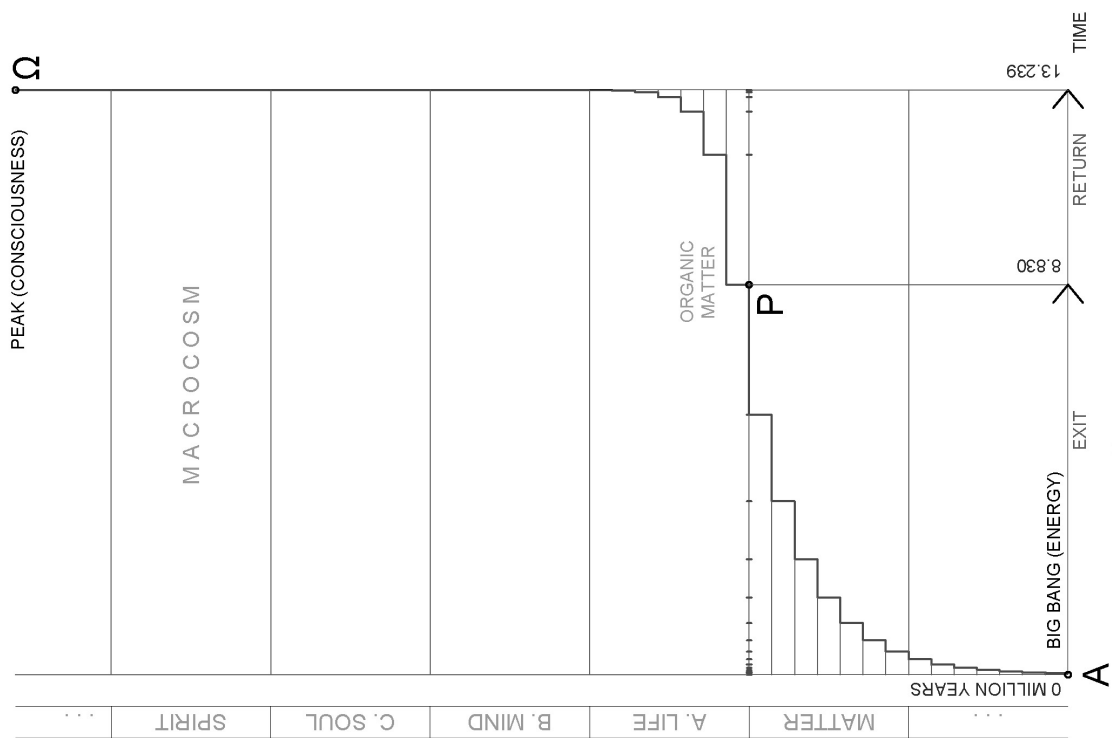


FIGURE 7-A

evolutionary periodic table and undertakes the return section through the C series —soul— and the following series in order to achieve full illumination around 34.17 years of age.

Comparing figures 7-A and 7-B, note how the overall macrocosmic and microcosmic patterns of development have identical structures. The only difference between them lies in the level at which pole P is positioned; that is, the pole toward which the “exit” section is oriented in each one of these patterns. In the macrocosm, it is situated at the “series leap” between “matter” and “life” —the appearance of organic macromolecules after the formation of the Earth—; while in the microcosm, it is situated at the “series leap” between the “mind” and the “soul” —the formation of the mature ego.

Attention! Take note of what we are proposing so as to enjoy the “magic” revealed in the following paragraphs. Pay special attention to the extreme simplicity of our proposal. We take, as such, the duration (34.17 years) of cycle C-4. We simply apply to this our overall pattern of rhythms. Then, setting the characteristic of a single point —the “mature ego” at pole P (21.92 years)—, the complete course of a human life is automatically delineated in full, in terms of both the rate of displaying the successive stages it goes through and the specific content of each of these stages. Pure “magic”! If our proposal is correct —which we shall soon test—, our life will be revealed as a fascinating dance to the beat of the music of the universe. Or, in other words, we will be nothing less than a radiant, condensed expression of the great cosmic symphony.

We shall now verify whether our forecasts fit the data provided by embryologists—for the intrauterine phase— and developmental psychologists —for the postnatal phase. We recommend simultaneously consulting Figs. 8 and 9 while reading the text.

We start by verifying the unicellular living phase, which in the macrocosm we called A-1, and which coincided with the emergence of prokaryotes first and then eukaryotes. The 28 days of women’s menstrual cycle is governed by a complex mechanism involving diverse organs and substances. During the first part of this 14-day cycle, the follicular maturation takes places, stimulated by the pituitary anterior lobe or gonadotrophic hormones, mainly the FSH. The primordial follicle contains a central cell —*ovogonia*— that first becomes a first-order *ovocyte* with a more robust nucleus and later —after being excreted during ovulation— transforms into a second-order *ovocyte* —with the corresponding chromatin depletion—, rendering it apt for fecundation. The A-1 cycle of our hypothesis, i.e. the one that deploys the unicellular stage in the macrocosm, according to our microcosmic scheme has a duration of precisely 14 days, which coincides exactly with half of the menstrual cycle of follicular maturation until fecundation.

After being fecundated, the ovule starts a period of rapid mitotic divisions in which the zygote passes through stages of 2, 4, 8, etc. cells or *blastomeres*. The cells continue dividing, first forming a solid ball —*morula*—, which subsequently becomes hollow —*blastula*. The three germinative layers then start to differentiate —*endoderm*, *ectoderm* and *mesoderm*— and the cavity of the body or *coeloma* is soon formed. The dorsal nervous cord begins as a longitudinal depression that becomes progressively deeper until finally its edges join together, transforming into a tubular nerve cord. A sustaining cordoned-off formation is produced directly below, derived from the mesoderm, called the *notochord* —backbone— that is common to the chordate *phylum* as a whole, and from which it receives its name. The entire process takes place from the fecundation of the egg cell through to the third week of pregnancy.

As we have already seen, the characteristic stage of A-2 in the macrocosm is the one that displays multicellular organisms through to the formation of the diverse types —*phyla*— of animals, such as chordates. In our scheme for the microcosm, this cycle spans from a little more than three weeks from fecundation, which once again matches the embryologic data fully, not only in content, but also in duration.

The human embryo, as it nears the end of the first month, develops some muscular segments, called *miosomas*, at each side of the neural tube, which represent the origin of the skeletal muscle system, typical

ENERGY	TIME SINCE ORIGIN	TIME SINCE FECUNDATION	TIME SINCE BIRTH	CYCLE	CORRESPONDENCES IN MACROCOSM	CHARACTERISTIC ACCORDING TO CHAKRAS	SPECTRUM OF CONSCIOUSNESS ACCORDING TO KEN WILBER	SPECTRUM OF CONSCIOUSNESS ACCORDING TO SRI AUROBINDO
	0 YEARS	- 42,72 DAYS	- 0,86 YEARS	A				
	18,99 DAYS	- 23,72 DAYS			ORGANIC MOLECULE			
	28,48 II	- 14,24 II	LAST MENSTRUATION	A-1	EUKARYOTES (ANIMAL KINGDOM)	MATTER (SURVIVAL)		
	42,72 II	0 II	FECUNDATION	A-2	CHORDATE (FILUM)	LIFE (SEX)		
	64,08 II	21,36 II		A-3	MAMMAL (CLASS)	POWER (DESIRE)		
	96,13 II	53,41 II		A-4	PRIMATE (ORDER)	LOVE		
	144,19 II	101,47 II		A-5	HOMINOID (SUPERFAMILY)	EXPRESSION		
	216,29 II	173,57 II		A-6	HOMINID (FAMILY)	INTELLIGENCE		
	324,44 II	281,17 II	(BIRTH) 10 DAYS	A-7	HOMO HABILIS (GENDER)	SPIRIT		
	1,33 YEARS		5,70 MONTHS	B-1	HOMO ERECTUS	PHYSICAL CONSCIOUSNESS	AXIAL BODY	PHYSICAL
	2,00 II		1,14 YEARS	B-2	ARCHAIC HOMO SAPIENS	VITAL CONSCIOUSNESS	PRANIC BODY	VITAL
	3,00 II		2,14 II	B-3	HOMO SAPIENS	INTENTIONAL MIND	IMAGINAL BODY	EMOTIONAL
	4,50 II		3,64 II	B-4	HOMO SAPIENS SAPIENS	AFFECTIVE LIFE	SYMBOLIC PREOP. MIND	DESIRE
	6,75 II		5,90 II	B-5	NEOLITHIC	EXPRESSION PSYCHOLOGICAL	CONCEPTUAL PREOP. MIND	INFERIOR MIND
	10,12 II		9,26 II	B-6	AXIAL AGE (ANCIENT TIMES)	INTELLECTUAL LIFE	CONCRETE OP. MIND	
	15,19 II		14,32 II	B-7	SCHOLASTISM (MIDDLE AGES)	SPIRITUAL ENERGY	FORMAL OP. MIND	LOGIC MIND
	22,78 II		21,92 II	C-1	POSITIVISM (MODERN AGE)	MATTER (POSITIVISM)	MATURE EGO	
	30,37 II		29,51 II	C-2	ECOLOGY (POSTMODERN AGE)	LIFE (ECOLOGY)	PLURALIST MIND	SUPERIOR MIND
	32,91 II		32,05 II	C-3	-	DESIRE OF REALIZATION	VISION - LOGIC	
	33,75 II		32,89 II	C-4	-	UNIVERSAL LOVE	ILLUMINED MIND	ILLUMINED MIND
	34,03 II		33,17 II	C-5	-	CREATIVE EXPRESSION	INTUITIVE MIND	INTUITIVE MIND
	34,12 II		33,26 II	C-6	-	INTEGRAL WISDOM	OVERMIND	OVERMIND
	34,16 II		33,30 II	C-7	-	SPIRITUAL REALIZATION	SUPERMIND	SUPERMIND
	34,17 II		33,31 II	Ω	PEAK (2.217 A.D.)		NON-DUAL	BRAHMAN / PARAMATMAN

FIGURE 8

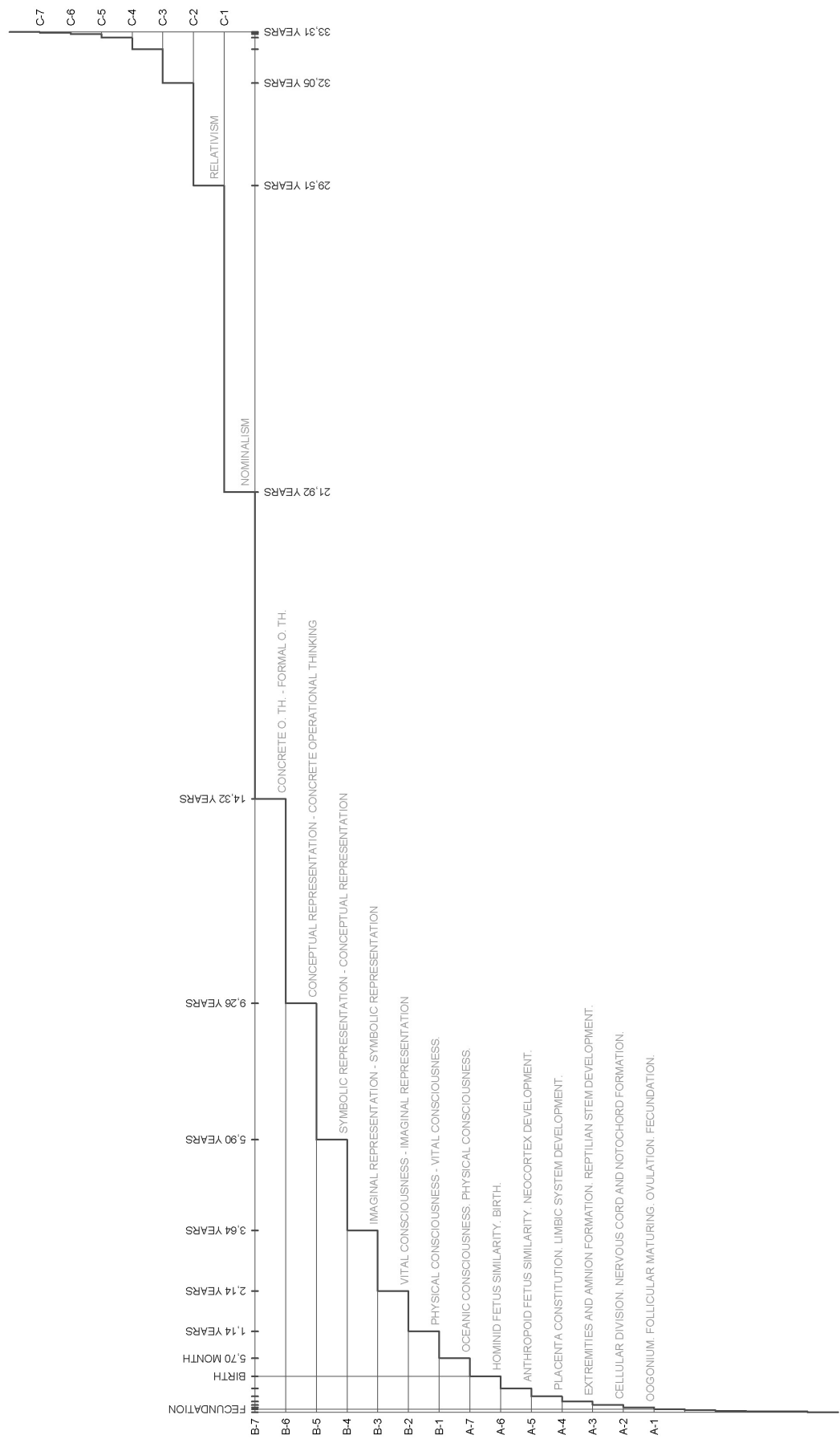


FIGURE 9

of all vertebrates. From the fourth week on, limbs —upper and lower— also start to be formed. At first, they are only small protuberances or *mamelons*. However, they soon start to grow and, during the sixth week, already constitute small, paddle-shaped expansions that will evolve into hands and feet. Fingers finally develop during the seventh and eight weeks. During that time, the *amnios*, which during the first weeks of gestation was a very small vesicle, starts to increase in volume and progressively cover the embryo completely.

Cycle A-3 of our hypothesis started, in the macrocosm, with the first marine vertebrates —fish— and embraced the progressive conquest of dry land, first with the appearance of limbs in the *tetrapods* —amphibians— and then with the invention of that smooth, transparent membrane —the *amnios*— which protects reptile and mammal embryos. In our scheme for the microcosm, this cycle spans from the fourth week to the eighth, once again totally matching embryological data.

At the start of the third month of gestation, the embryo begins to be called the *fetus* —until the end of its intrauterine life— and the placenta begins to be formed. The hormonal functions of the ovary are progressively reduced until being replaced by this organ that acts exclusively from the fourth month onward. Thus, from this moment onward, the oxygen and all the other nutrients that the fetus needs will be absorbed from the mother's blood through the umbilical cord and the placenta, which will maintain the same general structure until the end of the pregnancy. It is also during this time when the typical hair of mammals starts to grow.

As we have seen in the study of the macrocosm, cycle A-4 of our hypothesis embraces the whole development of placental mammals, from the primitive insectivores through to modern primates. According to our scheme of the macrocosm, this cycle deploys itself from the eighth week of pregnancy to the middle of the fourth month. Preciseness is once more present in terms of both content and rhythm.

From the fifth month of gestation on, the processes of the human fetus and those of the pongids continue with similar characteristics; for example, in chimpanzee, the form and size of the head, weight of the brain, position of the fontanelle, hair distribution and so on. As we have already stated, all these traits led S. J. Gould to propose that the appearance of hominids is due to a case of *neoteny* in our anthropoid ancestors.

The prediction in our scheme of the microcosm is that cycle A-5 displays itself from the middle of the fourth month of pregnancy to the end of the sixth month thus appears more than acceptable. Let us recall that apes developed first in this cycle in the macrocosm, followed by hominoids.

Cycle A-6 would then be the one that develops the specific characteristics of the hominid family. Although there is no longer any other species of this family but *Homo sapiens sapiens* —and therefore we cannot verify the similarities that we propose—, there are some indications that point in the right direction. That is, the similarities would be even greater than with the *pongids*. The key to explaining the gradual differentiation of human beings with respect to our anthropoid relatives lies mainly in the progressive slowing-down of our development, exactly as predicted in the overall pattern we propose. Therefore, although human beings and chimpanzees have more than 99% of structural genes in common and a strong resemblance in our fetal forms, there are small alterations in regulatory genes —those controlling the time of activation and deactivation of structural genes—, altering the rhythms in body growth processes and producing relatively major differences in adult forms —brain, hands, legs and so on— as well as in behavior. Retarded development and growth have allowed an astounding development of *cerebralization* in human beings, by prolonging the rapid cerebral growth typical of the fetus until later life. Or, likewise, the lower limbs in human beings, which are similar to those of the great apes at birth —it has been said that “babies are primates with short legs”—, in our case keep on growing for a long time, while those of our simian relatives, in comparison, remain underdeveloped.

It thus seems that due to this slowing-down of development, the similarities between human neonates and primitive hominoids would be even greater than with respect to simians. Suffice is to state the following: while chimpanzees reach 45% of their cranial capacity at birth and human beings, only the 23%, the *australopithecines* are in between, around 30%. The duration of this A-6 cycle, according to our scheme of rhythms, extends from the end of the sixth month of gestation until shortly after the ninth month, practically concurring with the time of birth. Or, in other words, when the cycle in which self-consciousness is about to flourish commences, the one that led to the expulsion of hominids from the “paradise” of animal integration with mother nature, the human creature is also expelled from the mother’s womb.

After birth, the human baby continues the slowing down of the developmental process, so much so, that it is been said that we spend our first year as an extra-uterine fetus. In fact, we are the only animal that grows more slowly and there is no other animal in which full development takes so long to achieve after birth. Orangutan, gorillas and chimpanzees grow until 11 years of age, while human beings keep on developing until they are 20 years old. This delayed growth is expressed through late maturation and extended infancy. As S. J. Gould states in his book *Ontogeny and Phylogeny*, this delay has reacted synergically with another two distinctive human traits: intelligence —as the brain increases in size due to the prolongation of the trends of fetal growth, as well as providing a longer period of childhood learning— and socialization —as family units consolidate by means of increasing care from parents towards children that develop so slowly.

We shall digress briefly so as to make a few comments on the evolution and development of the nervous system.

A few decades ago, the American physician Paul MacLean proposed a thought-provoking model, known as the “triunic brain” or “triune brain”. This model aimed to explain the function of existing traces of evolution in the structure of the human brain. MacLean argued that our skull actually contains three brains: the reptilian, the limbic system and the neocortex, each of which represents a different evolutionary state. They are formed one after another in an overlapping manner, from the inside out, ontogenetically during embryonic and foetal development and phylogenetically during the course of evolution from the first fish to modern man. These three brains are connected to one another, like “three interconnected biological computers”, though each retains its own distinct characteristics.

The R-complex (or reptilian brain), which comprises the brainstem and cerebellum, began to form evolutionarily about 500 million years ago and developed throughout our cycle A-3, after the formation of the nerve cord in the previous cycle. It is basically responsible for the primary vital functions, i.e. basic survival instincts. It is an action-oriented brain, responsible for automatic impulsive behaviour, i.e. fight-or-flight, reacting to direct stimuli, without involving any emotional process.

The limbic system (or paleomammalian brain), which includes the hypothalamus, hippocampus and amygdala, originated over 150 million years ago and evolved throughout our cycle A-4. As a whole, it is the seat of emotions and affective memory. This ability to bring the past into the present encourages learning and facilitates relationships, as evidenced by the evolution of mammals.

The neocortex (or neomammalian brain), formed by the neuronal layer covering the outer area of the brain, began to develop some 60 million years ago and gradually increased in size during in our cycle A-5 and the following. There is a direct relationship between this development of the cerebral cortex and social development: the more complex and organized societies are, the greater the size of the neocortex of its members. The neocortical system is responsible for the higher intellectual processes and is the source of the increasing cognitive abilities of higher primates.

This same evolutionary sequence: brainstem, R-complex, limbic system and neocortex, develops approximately from the inside out, during the embryonic and foetal development of every human being. As already stated, the neural tube begins to form in the 3rd week of gestation and, after it has closed

completely, the cephalic end begins to expand substantially past the 4th week, giving rise to the three primary vesicles, from which the entire brain originates. Or, for example, the medulla oblongata (R-complex component), which emerges at the end of the 8th week from the myelencephalon –one of the five secondary vesicles–, achieves its definitive form around the 20th week of gestation. Or the hippocampus (limbic system component), which has a similar appearance in all mammals, begins to unfold from the 13th week onwards, acquiring the adult form a month and a half later. The cerebral cortex (neocortex) develops later, mainly from the 5th month of pregnancy onward, when the surface of the hemispheres, which until then is almost completely smooth, begins to generate grooves and convolutions during the 6th and 7th months. These features dramatically enhance the surface area of the brain and facilitate the number of connections between neurons.

This parallelism between the phylogenetic and ontogenetic sequences of the development of the nervous system continues even after birth. For instance, there are some neurons known as fusiform neurons – responsible for connecting different regions of the brain– that are only found in humans and some great apes. It seems that the number of these neurons increased rapidly and dramatically with the emergence of *Homo sapiens*. Their most thought-provoking aspect, however, is that these cells currently do not exist in new-born babies, but begin to appear within a few months after birth. They then increase significantly in number between one and three years of age, coinciding precisely with our forecasts for the correlative stage for the emergence of *H. sapiens* in our individual development, as we shall see below.

We close this digression on the evolution of the nervous system and now continue with the testing of our proposal. We had left off at the movement of birth, after our cycle A-6. From this point on, we shall take as our reference framework the hierarchy of psychological levels so thoroughly presented by Ken Wilber throughout his body of work. Let us see the first of these levels, which, according to our pattern of rhythms should correspond to the transition from cycle A-7 to cycle B-1, as the former involves gestation and is the latter, deployment.

**Uroboric-axial body.** Shortly after birth, the child's perception begins to float in what is known as the pre-personal "uroboric" kingdom. The *uroboros* is still collective, archaic and primordially oceanic, but it already possesses some type of self-limitation. When the sensation of the infant self begins its evolution from the pre-personal *uroboros* to the individual organism, we see the emergence and creation of the organic and bodily self. By the term "axial body", we are mainly referring to the fact of feeling the physical body as something that differs from the environment. The baby has a physical body at birth, but it does not recognize the axial body until the fourth or sixth month of age. As the self-awareness of the child self begins to be centered and distinguish its individual organism, it also assimilates an ambiguous, yet still undefined threat of extinction. Therefore, simple, brief survival becomes a priority in this stage. Aurobindo calls this level, the "physical" level.

This stage corresponds with cycle A-7 (and B-1), which roughly spans from birth to the middle of the first year and leads to the emergence of the *Mulahara chakra*, whose main feature is "physical consciousness". It is also related to the simplest sensations and perceptions of the material world, along with the survival instinct. In the macrocosm, this phase corresponds with the appearance of self-awareness in *Homo habilis*. The correspondence is therefore complete in terms of both rhythm and content.

**Pranic body.** Given that a specific organic self begins to emerge, the typical emotions of this self likewise emerge. This basic emotional behavior is called the "pranic level" or "pranic body". Although emotions are still relatively simple and primitive in this stage, the incipient ego has a certain consciousness of the qualities of pleasure and pain and therefore the search for pleasure and the avoidance of suffering become a strong psychological force in this period. This level is also characterized for being full of an overall, still undifferentiated sexuality. Aurobindo calls this phase "vital consciousness".

In our hypothesis, this phase corresponds with cycle B-1 (and B-2), which develops between 5.7 months and 1.1 years of age and leads to the emergence of the *Svadhista chakra*, whose core feature is “vital and sexual consciousness”. The correspondence is once again absolutely clear. In the macrocosm, this stage corresponds to *Homo erectus*.

**Imaginal body.** The emergence of the infant’s ability to extensively create images marks a decisive point in the development process. When babies are about to reach the age of two, they are able to imagine objects that are not present with great accuracy. This enables an enormous burgeoning of their emotional life, as images are capable of evoking the same types of emotions and feelings as the actual object or person. Moreover, for the first time, the child may experience prolonged emotions, both of anguish—which is none other thing than imagined and hence maintained fear—and desire—which is none other than imagined pleasure. The image leads to the satisfying of desires and the lessening of anguish.

In our table of rhythms, this stage corresponds to cycle B-2 (and B-3), which develop between 1.1 and 2.1 years of age and leads towards the emergence of the *Manipura chakra*, whose main theme has to do with desire and the intentional mind. The accuracy of our scheme is therefore complete.

**Social cognition. (Symbolic pre-operational mind).** Between two and four years of age, the child starts to awaken to symbolic representation. A symbol goes beyond a simple image, because while images represent objects pictorially, symbols do not represent them figuratively, but verbally. The emergence and acquisition of language is, by all odds, the most significant period of the “exit” section in the vital cycle of the individual. Language and emergent abstract thought functions greatly expand the affective and kinesthetic world of the child. Through language, one may anticipate the future, make projects and channel the actions of today towards the future. This enables the onset of the sublimation of emotive-sexual energy, transforming it into more subtle, more complex, fully developed activities. As it moves forward toward cognition and social consciousness, the system of self is faced with the need to belong—and love—a social group that is greater than the individual bodily self.

This phase corresponds with cycle B-3 (and B-4) of our hypothesis, which develops between 2.1 and 3.6 years of age and leads to the emergence of the *Anahata chakra*, whose characteristic feature revolves around “affective life”. The correspondence can once more be seen to be very clear, in terms of both the temporal rhythm and content.

**Early ego/personic stage. (Conceptual pre-operational mind).** The child starts to transfer its central identity to verbal and mental realms. Usually, between 4 and 7 years of age, the child starts to discover the world and its conceptual representations. A concept is a symbol that not only represents the object or an action, but also a class of objects or actions. Although children still cannot operate or coordinate upon these conceptual representations in this phase, they already have a fairly coherent mental ego which differs from the body, transcends the simple biological world and can hence operate to a certain extent in said biological world as well as in the previous physical world, using the instrument of the simple representative mind. It is the level that Piaget calls “preoperational intuitive”.

In our hypothesis, this stage is equivalent to cycle B-4 (and B-5), which develops between 3.6 and 6 years and leads to the emergence of the *Vishudha chakra*, whose characteristic theme is “psychological expression”. The correspondence is yet again much more than acceptable.

**Mid egoic/personic stage. (Concrete operational mind).** The trend pointed out in the previous cycle is consolidated as a whole with the emergence—generally from the age of 7 years onwards—of what Piaget calls “concrete operational thinking”. That is, the conviction of being able to operate in both the concrete and bodily world by means of concepts. This mental level, which dominates the ego/person mid stage, is not capable of imagining possible or hypothetical relationships, and still cannot operate upon itself. Nevertheless, unlike its predecessor—the representative mind—the concrete operative mind can start to

assume the place or *role* of others. It is also the first structure that can really start to develop regulated operations, such as multiplications, divisions, classifications, the capacity to create hierarchies and so on.

This phase corresponds to cycle B-5 (and B-6) of our table of rhythms, which develops between 5.9 and 9.3 years of age and leads to the emergence of the *Ajna chakra*, whose central feature is “intellectual life”. The matching is once again very clear.

**Advanced ego/personic stage. (Formal operational mind).** Within the period of adolescence, later ego/person stage, another extraordinary differentiation starts to take place. Basically, the self simply begins to diversify from the concrete thinking process. On doing so, the self can, to a certain extent, transcend this process and thus operate in it. It is not surprising, therefore, that Piaget calls this stage the “formal operational stage”, as it enables one to operate upon one’s own concrete thinking—to think about thoughts—or, in other words, to work with formal or linguistic objects as well as with physical or concrete objects. It is the first clearly introspective and self-reflective level, which is able deal with the subjective mind and is capable of imagining possibilities that are not present, at the same time as carrying out hypothetical-deductive or propositional reasoning. Among other things, this enables the individual to adopt different points of view which are plural and universal. This stage starts to emerge around 12 or 13 years of age.

In his book *Up from Eden*, Ken Wilber divides this “advanced egoic/person” period we are discussing here into three phases: **lower** (that spans from Old Age to 500 BC), **middle** (from 500 years BC to 1500 AD) and **upper** (from 1500 to the XX century), all three of which exactly correspond to cycles B-6, B7 and C-1 of our hypothesis.

The **lower** phase of this stage of “formal operational thinking” corresponds, as we have just stated, in our hypothesis of rhythms to cycles B-6 (and B-7), which develop between 9.3 and 14.3 years of age—exactly coinciding with the emergence of this modality of thinking in the adolescence—bringing with it, the emergence of the *Sahasrara chakra*, whose main feature revolves around “spiritual energy”, which appeared in the “axial age”, in clear consonance with the self-reflective, introspective and subjective capacities of this level. Correspondence is once again very clear.

The **middle** phase of this stage of “formal operative thinking”, as stated, corresponds in our pattern of rhythms with cycle B-7 (and C-1), which develops between 14.3 and 21.9 years of age and leads to the emergence of the *Muladhara chakra*, whose central theme is related to the achievement of material objectives in a primordially materialistic world. All this perfectly matches the transition from “idealism”, typical of youth, to “pragmatism”, typical of incipient maturity. It is here when—in line with Wilber’s opinion—the “return” route commences.

The **upper** phase of this stage of “formal operative thinking”—which Wilber refers to as the “mature ego”—, corresponds, as mentioned, to cycle C-1 (and C-2), which develops between 21.9 and 29.5 years of age and leads to the emergence of the *Svadhastana chakra*, whose main characteristic is the conservation and spreading of life. All of this is clearly in consonance with the growing ecological sensitivity of this stage of life.

In cycle C-2, between the age of 29.5 and 32, the individual develops what is called the “pluralist mind”, which places emphasis on relationships, dialogue, networking, diversity, multiculturalism, the revitalizing of values relativity, respect and care for life, all of which define, in general, the emerging ecological paradigm. We are thus entering a higher cognitive structure to formal operative thinking. This new level, which has been called “integrative”, “creative synthetic” or “vision-logic”, is not limited to establishing linear relationships, but organizes networks of relationships. This means that, just as the formal operative mind “operates with” the concrete operative mind, the vision-logic mind “operates with” the formal operative mind. The panoramic vision-logic level thus apprehends a massive network of ideas, in addition to its

mutual ideas and interrelationships. This structure constitutes the onset of a higher capacity to synthesize, establish connections, establish relationships between truths, coordinate ideas and integrate concepts.

According to our hypothesis, this new cognitive structure will deploy collectively in cycle C-3, which will start to emerge in a century's time, and in individual human beings may flourish around 32 years of age. Verification of all this, as well as the forecasts of successive cycles will have to await future generations. What can be deduced from our periodic table is that around 2217, human beings around the age of 33 — like Buddha and Christ— will be able to attain full spiritual realization at the peak of evolution. At the end of the road, definitive Reality will be revealed, which, far from simply being yet another stage, will surprisingly be revealed to be the very substance of all the transited stages. That is to say, there will not be a new level, but we will perceive that in fact we have never left this total Reality that is, and always has been, our ultimate Identity.

### **Good news**

Before continuing, we would like to state that the hypothesis being presented here regarding a spiral evolution the rate of which accelerates on the way towards a final pole of attraction was initially inspired by the pioneering proposals of Teilhard de Chardin —on “the convergence towards Omega”— and Aurobindo Ghose —on “the ascent towards Supermind”—, which in their time were considered completely preposterous by the world of official science. In recent decades, however, increasingly more research has been carried out in diverse fields and from different approaches, highlighting evolutionary acceleration and its orientation towards a singularity, findings with which our hypothesis obviously has many points of coincidence.

Let us mention here, for example, among the scholars of “Big History”, Akop P. Nazaretyan, Alexander D. Panov and Graeme D. Snooks and their “Snooks-Panov Vertical” theory, as our hypothesis coincides almost completely with the stages proposed by Panov, as well as with the rate of acceleration of  $1/3$  proposed by Snooks. We also coincide to a great extent with: the work by Luigi Fontappiè's on the law of “Syntropy”, developed by Ulisse di Corpo and Antonella Vannini; the “Neo-orthogenesis” raised by my recently deceased fellow countryman Juan Luis Doménech Quesada; Carter Vincent Smith's proposal regarding the “Accelerating Evolution of Integral Consciousness”; the “White Hole in Time” described by Peter Russell; John Stewart's “Evolution's Arrow”; Ken Wilber's “Evolutionary Holoarchy”; Steve McIntosh's “Evolution's Purpose”; the “Spiral Dynamics” posited by Clare W. Graves, Don E. Beck and Chris Cowan; the studies by François Meyer and André de Cayeux on the “vertiginous acceleration of evolution and history”; the proposal by Jean Chaline, Laurent Nottale and Pierre Grou regarding “the fractal structure of the tree of life”; Richard L. Coren's “Theory of Cybernetic Evolution”; John M. Smart's “Acceleration Watch”; the “Singularity” of which Ray Kurzweil and the transhumanists speak; Terence McKenna's “Timewave Zero”; and so on... It is clear that the paradigm is shifting, as Carter Phipps summarizes in his book on “Evolutionaries”. Let us look in more detail at some of this research.

### **Addendum 1: Coincident research**

Some readers of the present work have raised doubts as to whether the sequence of evolutionary and historical cycles we have presented here may not have been somewhat forced to make it coincide with the forecasts of our hypothesis. On our part, we think that the series of selected milestones, grouped together in the form of blocks (Palaeontology —Kingdom: animal, Phylum: Chordata, Class: Mammals, Order: Primates, Superfamily: Hominoids, Family: Hominids, and Genus: *Homo*—, Palaeoanthropology —*H. habilis*, *H. erectus*, *Archaic H. sapiens*, *H. sapiens* and *H. sapiens sapiens*— and History —Neolithic, Ancient Age, Middle Ages, Modern Age and Postmodern Age—), is solid and coherent enough for there to be no kind of trick or manipulation involved. Nonetheless, in order to clarify any doubts, we shall now attempt to confirm our proposal by presenting some key points in the work of three researchers who have analyzed the

phenomenon of evolutionary acceleration independently and from different perspectives –Russian astrophysicist Alexander D. Panov, French palaeontologist Jean Chaline and American computer scientist Carter V. Smith–, whose proposals are fully in tune with the pattern of rhythms we have outlined in this article. Let us see.

**Alexander D. Panov** repeatedly treats the subject in a number of studies. The information we shall contribute here is specifically taken from a couple of articles of his that can be consulted on the Internet. One is entitled: “*¿Punto de bifurcación evolutivo?*” —*Evolutionary bifurcation point?*— (published in Spanish by LeonAlado.org), and the other: “*Scaling Law of the Biological Evolution and the Hypothesis of the Self-Consistent Galaxy Origin of Life*”.

Panov holds that the evolution of the Earth’s biosphere has passed through a series of stages with phase transitions between them, which he calls biosphere revolutions. He lists a sequence of 19 such revolutions, indicating their approximate dates and their main features. (At each stage, we in turn will indicate the correspondence of each one of these with our pattern of cycles). Let us see the complete list:

**0.** 3,800 million years ago. Emergence of life on Earth / Prokaryotes. [Period leading up to the 1st node of cycle A-1]

**1.** 1,500 million years ago. Oxygen crisis / Aerobic lifeforms / Eukaryotes / Neoproterozoic revolution. [Period leading up to the 2nd node of cycle A-1]

**2.** 590/510 million years ago. Palaeozoic Era begins / Cambrian explosion / Vertebrates. [Period leading up to the 2nd node of cycle A-2]

**3.** 235 million years ago. Mesozoic begins / Revolution of reptiles. [Period leading up to the 2nd node of cycle A-3]

**4.** 66 million years ago. The Cenozoic Era begins / Revolution of mammals and birds. [Period leading up to the 2nd node of cycle A-4]

**5.** 25/20 million years ago. The Neogene period begins / Hominoid revolution. [Period leading up to the 2nd node of cycle A-5]

**6.** 5/4 million years ago. The Anthropogene period begins / Quaternary era / First hominids appear. [Around the 2nd node of cycle A-6]

**7.** 2/1.6 million years ago. Olduvai / *Homo habilis* / Palaeolithic revolution. [Around the 2nd node of cycle A-7]

**8.** 0.7/0.6 million years ago. Shell / *Homo erectus* / Settlement of Europe and Asia. [Around the 2nd node of cycle B-1]

**9.** 0.4/0.22 million years ago. Achel / Archaic *Homo sapiens*. [Stage between the nodes of cycle B-2]

**10.** 150/100 thousand years ago. Mustie / *Homo sapiens* / Cultural revolution of the Neanderthals. [Stage between the nodes of cycle B-3]

**11.** 40 thousand years ago. Revolution of the Upper Palaeolithic / *Homo sapiens sapiens* / Cultural revolution of the Cro-Magnons. [Stage between the nodes of cycle B-4]

**12.** 12/9 thousand years ago. Neolithic revolution. [Period leading up to the 2nd node of cycle B-5]

13. 4000/3000 BC. Revolution of cities / Ancient Age begins. [Around the 1st node of cycle B-6]
14. 800/500 BC. Revolution of the axial era / Iron Age / Age of Empires. [Around the 2nd node of cycle B-6]
15. 400/600 AD. The Middle Ages begin. [Around the 1st node of cycle B-7]
16. 1450/1550 AD. First Industrial Revolution / Modern Age begins. [Period leading up to the 1st node of cycle C-1]
17. 1830/1840 AD. Second Industrial Revolution / Steam engine and electricity. [Period leading up to the 2nd node of cycle C-1]
18. 1950 AD. Computer science revolution / Post-Industrial Age begins. [Period leading up to the 1st node of cycle C-2]

We thus see that of the 19 biospheric and historical revolutions posited by Panov, 13 coincide fully with the rhythm of the cycles of our hypothesis, while the remaining 6 revolutions fully fit in with the pairs of nodes of 3 of our other cycles [“prokaryotic - eukaryotic” in cycle A-1, “urban revolution - axial revolution” (Ancient Age) in cycle B-6 and “first industrial revolution - second industrial revolution” (Modern Age) in cycle C -1], which Panov considered separately. We can therefore say that the coincidence is almost complete and, therefore, given that the research was carried out completely independently, we believe the circumstance to be truly significant and decisive.

**Jean Chaline**, in the paper entitled “*L’arbre de la vie a-t-il une structure fractale?*” (jointly authored by Laurent Nottale and Pierre Grou and also freely available on the Internet), studies the time sequences of the great evolutionary leaps in the global tree of life. In Table I (and Figure 1), he summarizes the list of dates and features of these leaps up until the appearance of primates, while, in Table IV (and Figure 6), he goes on to list the major transformations that have occurred throughout the process of humanization of primates. The combined series would thus be something like as follows:

1.  $3,500 \pm 400$  million years ago. Emergence of life / First prokaryotic cells. [Period leading up to the 1st node of cycle A-1]
2.  $1,750 \pm 250$  million years ago. First eukaryotic cells. [Period leading up to the 2nd node of cycle A-1]
3.  $1000 \pm 100$  million years ago. Multicellularity. [Period leading up to the 1st node of cycle A-2]
4.  $570 \pm 30$  million years ago. Exo-skeletons. [Period leading up to the 2nd node of cycle A-2]
5.  $380 \pm 30$  million years ago. Tetrapods / First tetrapod with lungs. [Period leading up to the 1st node of cycle A-3]
6.  $220 \pm 20$  million years ago. Homeothermy / First mammals. [Period leading up to the 2nd node of cycle A-3]
7.  $120 \pm 20$  million years ago. Viviparity / First marsupials and placentals. [Period leading up to the 1st node of cycle A-4]
8.  $65 \pm 5$  million years ago. First primate / Prosimians. [Period leading up to the 2nd node of cycle A-4]
9.  $40 \pm 5$  million years ago. First anthropoid ancestor / Simians. [Period leading up to the 1st node of cycle A-5]

10.  $20 \pm 2$  million years ago. Proconsul / Apes. [Period leading up to the 2nd node of cycle A-5]
11.  $10 \pm 1.5$  million years ago. Common ancestor P/G/H. [Around the 1st node of cycle A-6]
12.  $5 \pm 1$  million years ago. Australopithecus. [Around the 2nd node of cycle A-6 or around the 1st node of cycle A-7]
13.  $2 \pm 0.3$  million years ago. First *Homo*. [Around the 2nd node of cycle A-7]
14.  $0.18 \pm 0.02$  million years ago. Modern man / *Homo sapiens*. [Period leading up to the 1st node of cycle B-3]

We thus see that the first 13 evolutionary leaps that appear in this list correspond accurately, one by one, with all the nodes in our series A, except for number 12, which includes the 2nd node of cycle A-6 and the 1st node of cycle A-7. We can therefore affirm that the coincidence is once again practically complete. It is therefore not surprising that when the Chaline calculates the ratio between the durations of successive stages, he obtains an average value which, as he himself states –in his article “*La relativité d’échelle dans la morphogenèse du vivant: fractal, déterminisme et hasard*”–, seems to be, both generally and comprehensively, near to the square root of 3 ( $1.736 \pm 0.013$ ), which is completely in tune with our proposal, since, given that each one of our cycles has two nodes, applying this number ( $\sqrt{3}$ ) twice, we obtain:  $\sqrt{3} \times \sqrt{3} = 3$ , which, as we recall, is precisely and exactly the ratio between the durations of the successive cycles in our hypothesis! Can anyone believe that all this is coincidence?

**Carter V. Smith** has comprehensively studied the phenomenon of evolutionary acceleration on his two web pages: “*Twelve Stage Vision*” and “*Accelerating Evolution*”. From an integral perspective, he outlines a model of 12 grouped stages, three by three, in four eras –Body, Emotion, Mind and Spirit–, which reveals the exponential acceleration of human evolutionary development. We shall now summarize the entire series, which includes the approximate duration of each stage, in powers of 10, its main feature and the respective correlation with the cycles of our hypothesis:

- S1.** Since the origin of the universe to 5,000 million years ago. Matter / Big Bang → organic matter. [From the Big Bang to the origin of cycle A-1]
- S2.** From 5,000 to 500 million years ago. Cells / Organic matter → vertebrates. [From the origin of cycle A-1 to the origin of cycle A-3]
- S3.** From 500 to 50 million years ago. Animals / Vertebrates → simians. [From the origin of cycle A-3 to the origin of cycle A-5]
- S4.** From 50 to 5 million years ago. Mammals / Prosimians → Australopithecus. [From the origin of cycle A-5 to around the origin of cycle A-7]
- S5.** From 5 to 0.5 million years ago. Hominids / Australopithecus → *Homo erectus*. [From around the origin of cycle A-7 to around the 1st node of cycle B-2]
- S6.** From 500,000 to 50,000 years ago. Archaic man / *Homo erectus* → *Homo sapiens sapiens*. [From around the 1st node of cycle B-2 to around the 1st node of cycle B-4]
- S7.** From 50,000 to 5,000 years ago. Magic / *Homo sapiens sapiens* → Ancient Age. [From around the 1st node of cycle B-4 to around the 1st node of cycle B-6]

**S8.** From 5.000 to 500 years ago. Mythical / Middle Ages → Modern Age. [From around the 1st node of cycle B-6 to around the 1st node of cycle C-1]

**S9a.** From 500 years ago. Rational-individualistic.

**S9b.** Currently emerging. Rational-pluralistic.

**S9c.** In the near future. Rational-integral.

**S10.** Integral-spiritual, **S11.** Subtle-spiritual and **S12.** Causal-spiritual will unfold in an accelerated way during the next century and a half.

We thus see that each of the stages that Smith proposes includes, time and time again and in all cases, two complete cycles of our pattern of time. For that reason, as the duration of each cycle in our hypothesis is exactly one third of that of the previous one, if we consider stages that comprise a couple of these cycles –as Smith does–, the ratio between their durations will be:  $3 \times 3 = 9$ , which is obviously very close to 10, the value this American researcher uses in an approximate way, in his evolutionary scheme. Once again, therefore, there is practically complete coincidence between the evolutionary path outlined in “Twelve Stage Vision” and our hypothesis, and it is no wonder Smith situates the end stop –Omega– of the evolutionary spiral around the year 2150, not very far from our 2217.

In conclusion, given the enormous coincidences between the investigations of Panov, Chaline, Smith and my own, all carried out independently and from very different approaches, it seems evident that we have unexpectedly discovered a very precise evolutionary pattern within the apparently random dynamics of the universe. It is obvious, therefore, that, given the scope and profound implications of this discovery, a host of novel perspectives now open up. So from here, as we stated in the Introduction, all readers are invited to investigate the suggestive paths that are beginning to appear. We may thus possibly discover that the reality is much more fascinating than we could ever have imagined.

## Addendum 2: Further coincident research

When I started to develop this evolutionary hypothesis back in the early 1980s, it was truly upsetting to realize the utter solitude in which I found myself. I felt I had discovered something truly valuable and yet could not find others with whom to share the discovery and compare opinions. There were times when I was even tempted to throw in the towel. Repeatedly, however, the intuition that what I had found was worth the effort gave me strength to keep working on it.

In recent years, though, the picture has changed completely thanks to the enormous possibilities offered by the Internet. It has been a wonderful surprise and great joy for me to repeatedly find references to numerous authors who, from very different perspectives, put forward very similar ideas to those I had been proposing for many years. To highlight these obvious similarities between research carried out from very different fields, we shall next present a chart (Fig. 10) which aims to summarize the proposals of a significant number of authors who have studied this clamorous phenomenon of evolutionary acceleration, in line with our own work.

This chart will naturally include the three researchers cited in the previous Addendum –**Alexander Panov**, **Jean Chaline** and **Carter Smith**–, as well as the other two –**André de Cayeux** and **Ervin Laszlo**– cited in our article. We shall also include the proposals by the Greek physicist and futurist **Theodore Modis**, author of the article entitled *Forecasting the Growth of Complexity and Change*; the North American electrical engineer **Richard L. Coren**, author of *The Evolutionary Trajectory*; the American engineer, inventor and futurist **Ray Kurzweil**, author of *The Singularity is Near*; the Swedish software engineer **Nick Hoggard**,

A	...	J.D. FAIXAT	A. PANOV	C. SMITH	J. CHALINE	A. DE CAYEUX	E. LASZLO	T. MODIS	R. COREN	R. KURZWEIL	N. HOGGARD	M.G. CASAS
		<b>BIG BANG</b> ...	...	<b>(BIG BANG)</b> <b>MATTER</b> (ORGANIC MOLECULE)	...	...	...	BIG BANG ...	BIG BANG ...	...	BIG BANG ...	...
		<b>ORGANIC MOLECULE</b> PROKARYOTES (KINGDOM: ANIMAL) EUKARYOTES	PROKARYOTES		PROKARYOTES			SOLAR SYSTEM FIRST LIFE	PROKARYOTIC LIFE	LIFE	SELF REPRODUCING FORMS OF LIFE	PROKARYOTES
A-1	1st NODE		EUKARYOTES		EUKARYOTES							EUKARYOTES
A-2	1st NODE	MULTICELLULAR LIFE (PHYLUM: CHORDATE)		CELLS (VERTEBRATES)	MULTICELLULARITY EXO-SKELETONS				EUKARYOTIC RADIATION	CAMBRIAN EXPLOSION	SEXUAL REPRODUCTION	MULTICELLULAR COELOMATES FISHES
A-3	2nd NODE	REPTILES (CLASS: MAMMAL) PRIMITIVE MAMMAL	REVOLUTION OF REPTILES		TETRAPODS				APPEARANCE OF CLASS MAMMALIA	REPTILES	MAMMALS	AMPHIBIANS REPTILES MAMMALS
A-4	1st NODE	P. PLACENTALS (ORDER: PRIMATE)	REVOLUTION OF MAMMALS	ANIMALS (PROSIMIANS)	HOMEOTHERMY VIVIPARITY							
A-5	2nd NODE	MONKEY <b>(SUPERFAM: HOMINOID)</b> <b>GREAT APES</b>	REVOLUTION OF HOMINIDS		PROSIMIANS			FIRST PRIMATES		ORDER PRIMATE	PRIMATES	PROSIMIANS
A-6	1st NODE	HOMINIDAE (FAMILY: HOMINID)	REVOLUTION HOMINIDS	MAMMALS	GREAT APES COMMON ANCESTOR PIGH			FIRST ORANGUTAN	APPEARANCE OF SUPERFAMILY HOMINOIDEA	SUPERFAMILY HOMINOIDEA	GREAT APES	MONKEYS
A-7	2nd NODE	AUSTRALOPTHECUS (GENUS: HOMO) HOMO HABILIS	PALEOLITHIC REVOL HOMO HABILIS		AUSTRALOPTHECUS			FIRST HOMINIDS	APPEARANCE OF GENUS HOMO	FAMILY HOMINIDAE BIPEDAL ANCESTOR		PONGIDS
B-1	1st NODE	(I.L. MODE 1)	HOMO ERECTUS	HOMINIDS	FIRST HOMO	INITIAL LITHIC CULTURE		DEVELOPMENT OF SPEECH		GENUS HOMO	HOMO HABILIS	AUSTRALOPTHECINES
B-2	2nd NODE	(I.L. MODE 2)	ARCHAIC H. SAPIENS	(H. ERECTUS)		CHELLEAN ACHEULEAN		DISCOVERY OF FIRE	APPEARANCE OF ARCHAIC HOMO SAPIENS	SPOKEN LANGUAGE		HOMO ERECTUS
B-3	1st NODE	ARCHAIC H. SAPIENS (I.L. MODE 3)		ARCHAIC MAN	HOMO SAPIENS	LEVALLUISAN MOUSTERIAN		EMERGENCE OF "MODERN HUMANS"				
B-4	2nd NODE	<b>HOMO SAPIENS</b> <b>(REV. OF NEANDERTHALS)</b>					NOMADIC HUNTER-GATHERER SOCIETY	ROCK ART	APPEARANCE OF H. SAPIENS SAPIENS	HOMO SAPIENS	HOMO SAPIENS SAPIENS	HOMO SAPIENS SAPIENS
B-5	1st NODE	H. SAPIENS SAPIENS (GROMAGNON) (I.L. MODE 4)	<b>H. SAPIENS SAPIENS</b> <b>(REV. OF GROMAGNON)</b>	MAGIC		AURIGNACIAN MAGDALENIAN	AGROPASTORAL SOCIETY SETTLEMENTS	AGRICULTURE	DEVELOPMENT OF COMMUNAL VILLAGES	ART		
B-6	2nd NODE	NEOLITHIC REV.				MESOLITHIC POLISHED STONE		WRITING	DEVELOPMENT OF "WRITING"	AGRICULTURE	FIRST CIVILIZATION	
B-7	1st NODE	CIVILIZATION (ANCIENT TIME)	<b>REVOLUTION OF CITIES</b> REV. OF AXIAL ERA	(ANCIENT AGE)		METAL AGES	AGRICULTURAL SOCIETY	DEMOCRACY		CITY-STATES		
C-1	2nd NODE	PATRICISIM (MIDDLE AGES) SCHOLASTICISM	MIDDLE AGES	MYTHICAL		RENAISSANCE MACHINISM	PRE-INDUSTRIAL FEUDAL SOCIETY	CHRISTIANITY GUNPOWDER	DEVELOPMENT OF PRINTING	PRINTING	<b>FIRST TECHNOLOGICAL</b> REVOLUTION	
C-2	1st NODE	EMPIRICISM (MODERN AGE) POSITIVISM	1 <sup>ST</sup> INDUSTRIAL REV.	(MODERN AGE)		ATOMIC AGE	INDUSTRIAL SOCIETY	RENAISSANCE	DEVELOPMENT OF DIGITAL ELECTRONICS	INDUSTRIAL REVOL. ELECTRICITY COMPUTER	INDUSTRIAL REVOL.	
C-3	2nd NODE	ECOLOGY (POSTMODERN AGE)	<b>COMPUTER</b> <b>SCIENCE REVOLUTION</b>	RATIONAL			POST-INDUSTRIAL SOCIETY	MODERN PHYSICS DNA INTERNET		<b>PERSONAL COMPUTER</b>	INVENTION OF COMPUTER WWW	
...	...		...	INTEGRAL	...	...	...	...	...	...	...	...
Ω	...	YEAR 2217	YEAR 2027	YEAR 2150	YEAR 2050 / 2110	YEAR 2100	...	YEAR 1990	YEAR 2140	YEAR 2045	YEAR 2004	...

FIGURE 10

author of *Evolution and the Feigenbaum Number*; and that of the Spanish biologist **Miguel García Casas**, author of *Teoría de la vida embarazada y la reprobolución* [Theory of Pregnant Life and Reproevolution].

It is truly wonderful to see the myriad similarities between the lists of the major evolutionary milestones proposed in all these works, to the degree that the charts that represent them –whether linear or logarithmical– are virtually identical in all cases. There is just a very slight difference –of only one or two centuries– regarding the date of the final pole towards which the trajectories lead. Yet what are a hundred or two hundred years after a journey of more than 13,500 million years?

Clear differences of opinion do exist among these authors, however, concerning the valuation of this final pole of infinite evolutionary acceleration. From our point of view, it is a “singularity” of the same calibre as that of the initial instant of the Big Bang. If this original pole basically consisted in an *explosion* in the field of “energy”, the final pole towards which we are precipitously heading will essentially consist in an *implosion* in the field of “consciousness”. Note, however, as we shall in the next chapter, both aspects –“energy” and “consciousness”– are not two different realities, but polar aspects of one and the same unique Emptiness, the objective and subjective aspects of ever-present, simple and full Self-evidence. Thus, from our point of view, the “trick” of evolution and of history will be definitively revealed at this forthcoming final instant. That is, the entire trajectory from the Big Bang to today has occurred in this eternal Now that we in fact are. It will thus be made manifest that our life has not been a mere fleeting fragment in the midst of an endless process, but that we have, in fact, always been the pure, timeless Self-evidence in which all worlds have happened, happen and will happen. There has been no “before”. There will be no “after”. There is only Now. Is it not self-evident?

Attention, though! Of course, that final moment will not be a mere subjective experience achieved by some enlightened individuals. As we will see later, there is truly no subjectivity without objectivity, or individuals truly separate from their universal environment. Therefore, the final experience will be simultaneously interior and exterior, both individual and collective. As it is now. As it has always been. (The following Addendum 3 will outline the evolutionary scenario from this integral approach).

### Addendum 3: Integral evolution

Throughout this work, we have analyzed the evolutionary rhythm of both the global “macrocosm” –the human phylogeny– and the individual “microcosm” –our own ontogeny– in their respective and similar trajectories, from the original pole, basically energetic –exterior–, until the final pole, basically conscious –interior–. These four aspects –individual/collective, interior/exterior– have been present in each stage of the evolutionary path, as they all imply one another. None of them could take place without the presence of all the others. Unfortunately, this evidence has not been demonstrated until very recently, while bias and sectarianism have produced a great deal of incomprehension and suffering throughout history.

The great integral thinker Ken Wilber has condensed virtually all of human knowledge in a simple chart that summarizes the entire history of evolution in its four aspects –individual, collective, exterior and interior– of an all-englobing and consistent way. It comprises a simple diagram with four quadrants, in which “individual” aspects are located at the top, “collective” aspects at the bottom, “exterior” aspects on the right and “interior” aspects on the left. Thus, the upper-left quadrant describes the interior-individual process (the conscious self); the upper-right quadrant, the exterior-individual process (the energy organism); the lower-left quadrant, the interior-collective process (the cultural perspective); and the lower right quadrant, the exterior-collective process (the social system).

All the evolutionary levels displayed throughout the history of the universe –the entire energy-consciousness spectrum– are reflected in each of the quadrants according to their specific aspects. In almost all his work, Wilber has placed greater emphasis on the exhaustive study of the interior

(psychological and spiritual) spheres. On the other hand, the authors mentioned in the previous Addenda have found it easier to resort to exterior forms when investigating the rhythm of evolution based on paleontological and anthropological data. It seems clear that the integration of both bodies of work can be extremely fruitful for all. We shall thus attempt to express the results of our research in a diagram (Fig. 11) similar to that of Wilber's four quadrants. We believe that, in this way, we can provide greater precision in the definition of the levels of the energy-consciousness spectrum.

#### **Addendum 4: Inner evolution**

In Addenda 1 and 2, we have seen the great similarities between our hypothesis regarding the rhythm of evolution and the research of other authors who have also independently studied the surprising phenomenon of evolutionary acceleration from different perspectives. Almost all of these researchers have taken their data from the "objective" or "external" world.

In Addendum 3, we insisted that, in the phenomenal world, "objects" cannot exist without "subjects" or "outside" without "inside", as both aspects are mutually dependent. Inexorably so.

Therefore, in this Addendum 4 we shall refer specifically to a number of authors who have methodically studied "inner" dynamics, mainly in the field of developmental psychology. This scientific discipline chiefly studies the regularities that occur in the process of psychological development of human beings throughout their life cycle. The specific areas of study can be highly diverse –cognitive, moral, emotional, etc.–, yet in all cases, a detailed description is given of a number of very specific stages which humans sequentially pass through from birth to death given the appropriate circumstances. The existence of these successive stages is not at all mere speculation, but is based on data provided by a major body of research.

We would like to point out here that, as the field of research of developmental psychologists chiefly focuses on the process of human life from birth onward, the spectrum of reality these studies cover is hence restricted to only the last stages of evolution. In principle, it could be thought that this limitation might hinder our attempt to test the hypothesis that we are developing. However, the truth is that the abundance and accuracy of the data we have found has enabled us to carry out the test very easily with very positive results.

To describe the different "lines" or "currents" of development which are the subject of research in this field of psychology, Ken Wilber uses the analogy of a mountain which can be climbed via a number of routes. (We postulate that it is a stratified mountain, like Plank's "quanta", Gould and Eldrege's "punctuated equilibrium" or Mandelbrot's "fractals"). The landscapes spotted from each of these routes may be very diverse, but in all cases, the paths taken must inexorably pass through successive levels (in our words, strata) to access the summit. That is to say, all the lines or currents of development, each with its specific characteristics, advance along the same altitude gradient, defined by the degree of consciousness, in such a way that the higher the degree of consciousness, the higher the development of a particular line will be.

Wilber posits a graph –a "psychograph"– with the colours of the expanded visible electromagnetic spectrum –from infrared to ultraviolet and beyond– to define the different levels of development. He uses the same psychograph for all lines or currents, since, as already stated all progress through the same altitude gradient. Note, however, that altitude is simply a measure or a marker of something, yet, in itself, lacks any particular content. Similarly, consciousness, in itself, is not a concrete phenomenon, but the vacuum within which all phenomena emerge. Nor is it a specific line of development among many others, but rather the opening in which all the lines of development unfold. Thus, the degree of consciousness allows us to determine the height at which each of these lines passes at any given time.

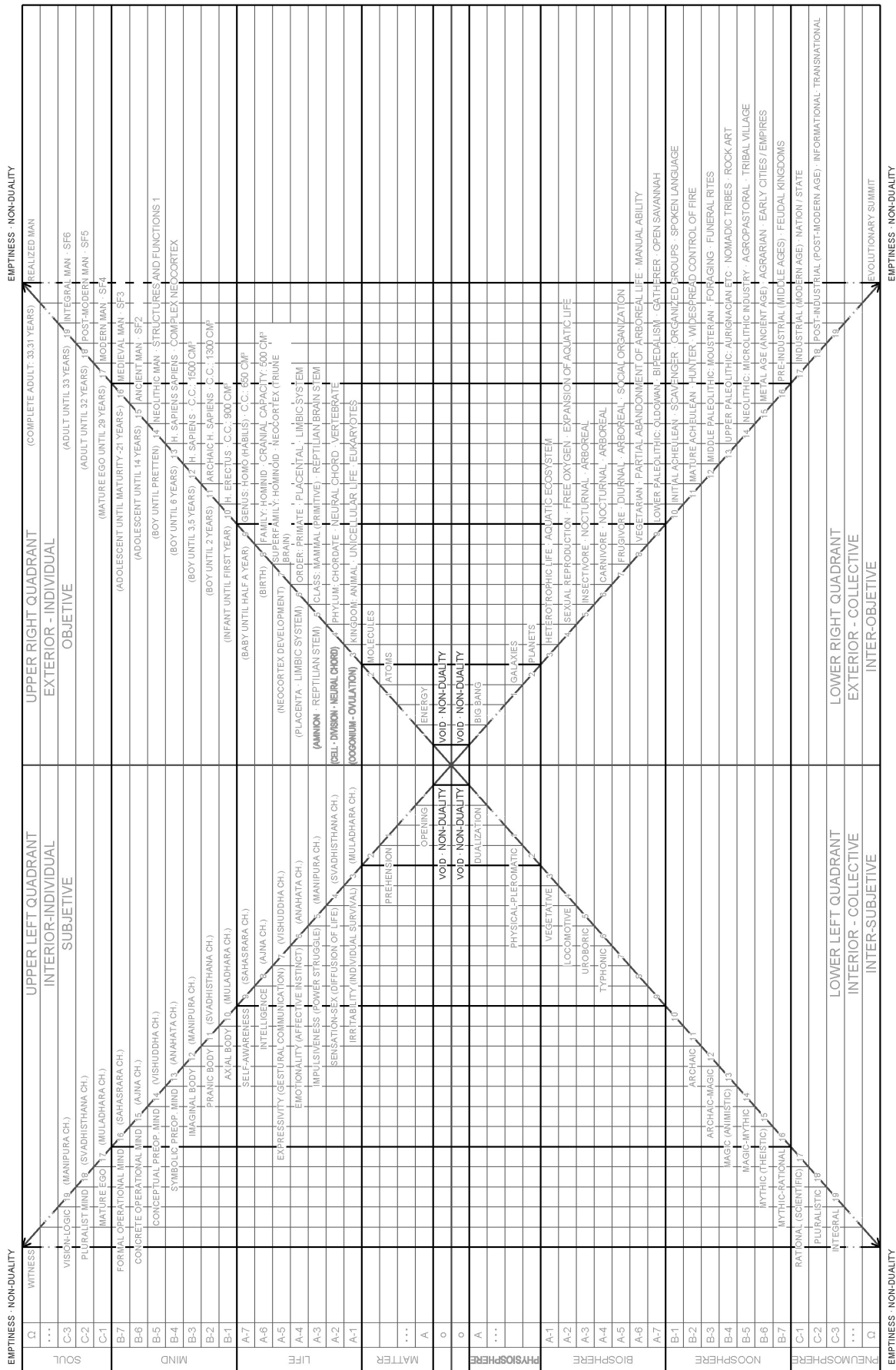


FIGURE 11

As already stated, after analyzing the work of countless researchers of psychological development, Wilber has designed an integral chromatic altimeter that precisely defines the successive general levels through which the different lines pass. For instance, we may speak of orange cognition, an orange sense of identity, an orange vision of the world, etc. Thus, the “chromatic altimeter” shows the general similarities between the different lines or currents of development.

Dear reader, if you have followed what we have been explaining in this book so far, you may have noticed that our basic hypothesis is ultimately no other than a “sound altimeter” of overall evolution and individual development. As you will recall, we stated that, starting from the vibrating unity of original energy-consciousness –the dual appearance of ever-present Self-evidence–, the successive second harmonics generated the entire spectrum of “potential levels of stratified stability” which, as we have shown, channel the entire process of evolution and development. Amazingly, our “sound altimeter” exactly coincides with Ken Wilber’s “chromatic altimeter” in its totality, level by level!!! Wilber’s **infrared** corresponds to our **B-4**, **magenta** to **B-5**, **red** to **B-6**, **amber** to **B-7**, **orange** to **C-1**, **green** to **C-2**, **teal** to **C-3**, **turquoise** to **C-4**, **indigo** to **C-5**, **violet** to **C-6**, **ultraviolet** to **C-7** and **clear light** to **beyond series C**, i.e., beyond the transpersonal Witness. All twelve levels!!! Full house!!!

In Figure 12, we have attempted to show the full correspondence between the stages in human life observed by developmental psychologists and the evolutionary levels proposed in our hypothesis. We have placed our “sound altimeter” on the left side of the chart, Wilber’s “chromatic altimeter” on the right, and the names and areas of study of 15 of the most renowned researchers in human psychological development along the top: **Jean Piaget**, **Michael L. Commons** and **Francis A. Richards** (cognitive), **Jean Gebser** and **Ken Wilber** (worldviews), **Abraham Maslow** (needs), **Clare W. Graves** and **Jenny Wade** (values), **Don E. Beck** and **Chris Cowan** (spiral dynamics), **Jane Loevinger** and **Susanne Cook-Greuter** (self-identity), **Lawrence Kohlberg** (morals), **James Fowler** (stages of faith) and **Robert Kegan** (orders of consciousness). The solidity of the resulting plot is almost complete. Fundamentally, in the section most investigated by these psychologists (between our steps B-4 and C-3), the coincidence between the stages posited by each of these authors and the levels indicated in the two reference altimeters (sound and chromatic) is overwhelming. It thus seems that our hypothesis passes (how could it not!) the test of “inner development” with honours. We insist: Can anyone honestly think that this is pure coincidence?

To illustrate the rapid emergence of these psychological stages along the course of the evolutionary and historical process, we had intended to use Wilber’s chromatic altimeter. We have encountered, however, the problem of the lack of contrast between the colours representing the successive cycles –magenta, red, amber, etc.–, which makes it difficult to perceive successive phases and interfaces. So, finally, we have chosen to use the colours suggested in Spiral Dynamics, as in this case, cool tones alternate with warm, so the graph presents greater contrast and is therefore more expressive and clarifying. Obviously, the drawing is also applicable to any other line of development ... but without colours.

Let us then first outline a basic understanding of this transdisciplinary (bio-psycho-social-cultural) model of Spiral Dynamics, which has major similarities with our proposal. Subsequently, as already stated, we shall graphically express these correlations in Figure 13. Finally, we shall draw a very suggestive conclusion from all this.

Spiral Dynamics is rooted in the long-standing and thorough research of professor of psychology Clare W. Graves into the evolution of individuals and societies. Analyzing the different ways of thinking and ways of being of human beings, he identified a number of common patterns or basic value systems and integrated them into a multi-layered model of progressively complex levels. Graves held that the nature of human beings is an open system in constant evolution which advances by quantum leaps from a stationary state to another through a hierarchy of ordered, relatively stable systems, which unfurl spirally over the entire historical process of humankind from its beginnings to the present. He posited that these emergent stages are not rigid steps, but rather flowing, overlapping and interrelated waves, leading to the expansive spiral

	J. PIAGET (M. COMMONS/ F. RICHARDS)	J. GEBSER (K. WILBER)	A. MASLOW	C. GRAVES	D. BECK C. COWAN (J. WADE)	J. LOEVINGER S. COOK-GREUTER	L. KOHLBERG	J. FOWLER	R. KEGAN	K. WILBER
	COGNITIVE	WORLDVIEWS	NEEDS	VALUES	SPIRAL DYNAMICS	SELF-IDENTITY	MORAL	STAGES OF FAITH	ORDERS OF CONSCIOUSNESS	ALTITUDE
B-2 (LOWER PALEOLITHIC)		ARCHAIC								
B-3 (MIDDLE PALEOLITHIC)	SENSORIMOTOR	(ARCHAIC- MAGIC)								
B-4 (UPPER PALEOLITHIC)	PREOPERATIONAL (SYMBOLIC)	MAGIC	PHYSIOLOGICAL SURVIVAL		SURVIVAL (BEIGE)	SYMBIOTIC	PRE-MORAL	0 UNDIFFERENTIATED	0 INCORPORATIVE	INFRARED
B-5 (MESOLITHIC- NEOLITHIC)	PREOPERATIONAL (CONCEPTUAL)	(MAGIC- MYTHIC)	PHYSIOLOGICAL SATISFACTION	MAGIC- ANIMISTIC	KIN SPIRITS (PURPLE)	IMPULSIVE	1 OBEDIENCE AND PUNISHMENT	1 INTUITIVE- PROJECTIVE	1 IMPULSIVE	MAGENTA
B-6 (ANCIENT TIMES)	CONCRETE OPERATIONAL	MYTHIC	SAFETY	EGOCENTRIC	POWER GODS (RED)	SELF-PROTECTIVE	2 SELF-INTEREST	2 MYTHIC-LITERAL	2 IMPERIAL	RED
B-7 (MIDDLE AGES)	EARLY FORMAL OPERATIONAL	(MYTHIC- RATIONAL)	BELONGINGNESS	ABSOLUTISTIC	TRUTH FORCE (BLUE)	CONFORMIST	3 INTERPERSONAL ACCORD	3 SYNTHETIC- CONVENTIONAL	3 INTERPERSONAL	AMBER
C-1 (MODERN AGE)	FULL FORMAL OPERATIONAL	MENTAL RATIONAL	SELF-ESTEEM	MULTIPLISTIC	STRIVE DRIVE (ORANGE)	CONSCIENTIOUS	4 LAW AND ORDER	4 INDIVIDUAL- REFLEXIVE	4 INSTITUTIONAL	ORANGE
C-2 (POSTMODERN AGE)	(SYSTEMATIC)	(PLURALISTIC)		RELATIVISTIC	HUMAN BOND (GREEN)	INDIVIDUALISTIC	5 SOCIAL CONTRACT	5 CONJUNCTIVE	(45)	GREEN
C-3	(META-SYSTEMATIC)	APERSPECTIVIST INTEGRAL	SELF- ACTUALIZATION	SYSTEMIC	FLEX FLOW (YELLOW)	AUTONOMOUS	6 PRINCIPLED CONSCIENCE	6 UNIVERSALIZING	5 INTERINDIVIDUAL	TEAL
C-4	(PARADIGMATIC)				GLOBAL VIEW (TURQUOISE)	INTEGRATED				TURQUOISE
C-5	(CROSS-PARADIGMATIC)		(SELF- TRANSCENDENCY)		(TRANSCENDENT)	CONSTRUCT-AWARE				INDIGO
C-6					(UNITY)	EGO-AWARE				VIOLET

FIGURE 12

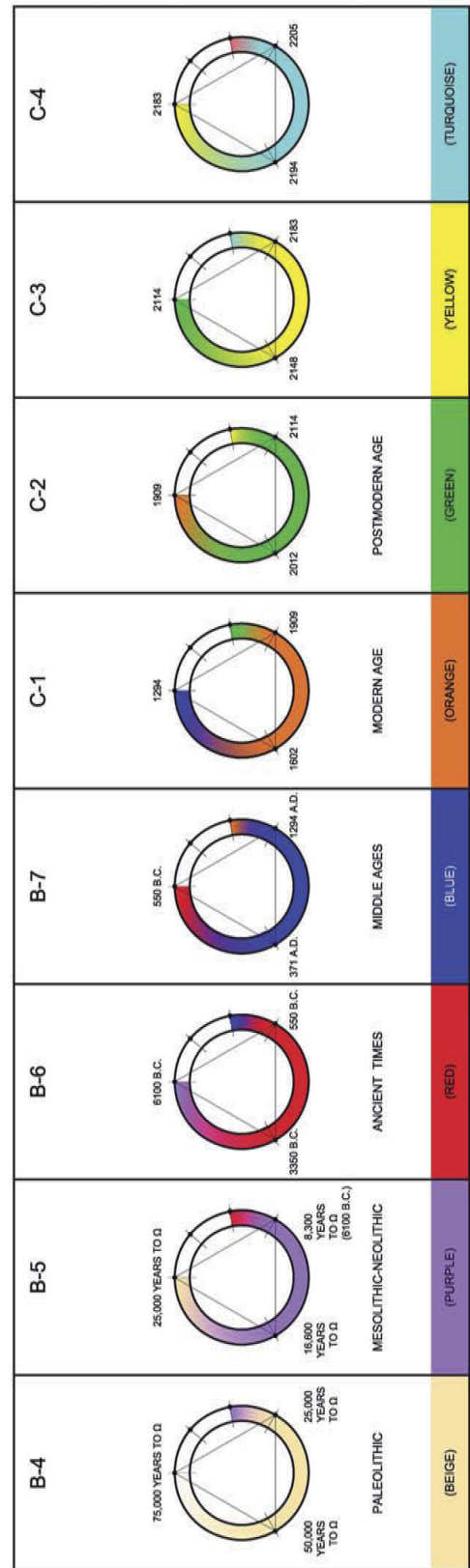
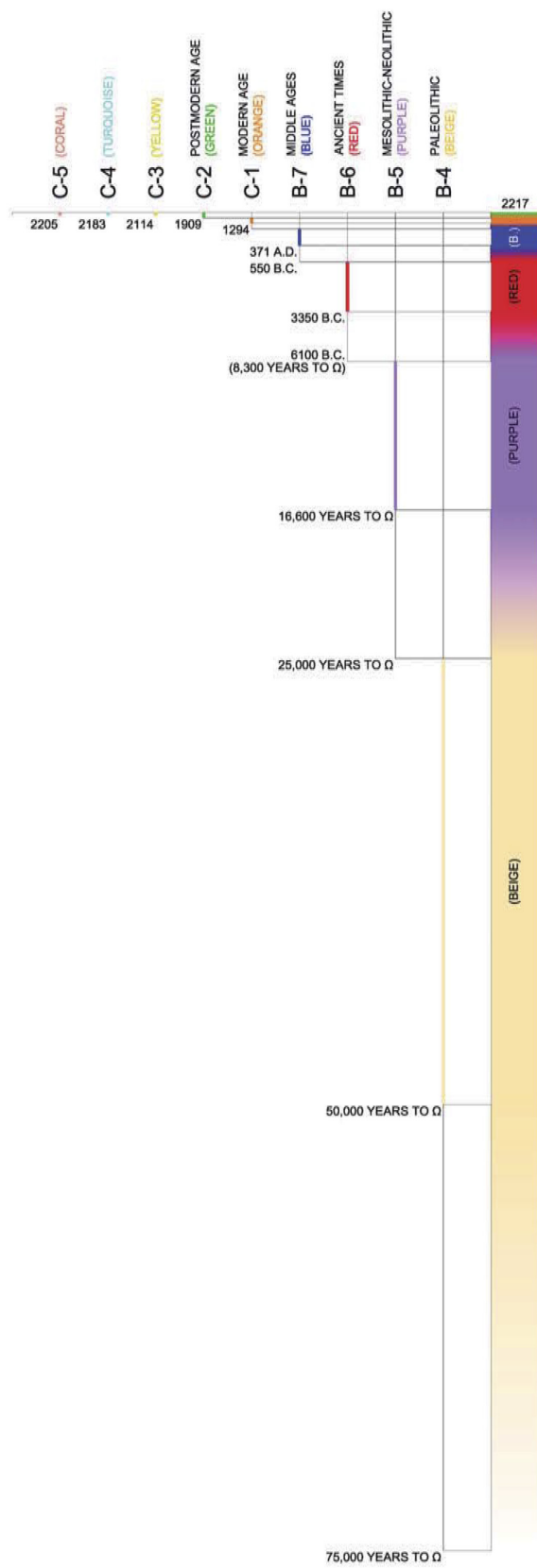


FIGURE 13

dynamics of individual and collective development, driven by their own internal dynamics and changing conditions of life. As it possesses a broader perspective and a more complex capacity for organization, each emergent wave “transcends and includes” –as Wilber puts it– all previous waves, acquires the maximum importance for a period of time and ultimately ends up being “transcended by and included in” a new, broader-ranging and more complex wave.

After Graves’ death, his co-workers Don E. Beck and Chris Cowan continued to develop and corroborate their mentor’s theoretical model and used it as the basis for their book *Spiral Dynamics: Mastering Values, Leadership, and Change*. These authors call the successive paradigms that define each of the eight basic levels of the spectrum “value memes” or “vMememes”. As can be seen in Fig. 12, the eight levels of Spiral Dynamics exactly coincide, one by one, with all the cycles of our hypothesis between B-4 and C-4. It occurred to Beck and Cowan to identify each of these levels with a certain colour, thus facilitating the understanding and dissemination of their intelligent and effective model. The basic characteristics of these levels or colours are as follows:

**Beige:** Survival Instinct. Satisfaction of physiological needs. Impulsiveness. Biological automatism. Immediate action. [Nomadic hordes. “Savagery”.]

**Purple:** Kin Spirits. Loyalty to the chief, the clan, tradition. Ethnocentric culture. Safety. Magic-animistic thinking. Superstitions. Taboos. Rituals to appease ancestral spirits. [Tribal settlements. “Barbarism”.]

**Red:** Power Gods. Egocentric. The grandiose, impulsive, omnipotent Self. Triumph of the strong. Myths of heroes. Fighting. Conquest. Domination. Exploitation. Tyranny. [Ancient empires. “Enslavement”.]

**Blue:** Truth Force. Absolutist thinking. Certainty. Existence ordered via a divine code. Regulations. Rules. Traditions. Obedience. Discipline. Guilt. Self-sacrific reward. Order. Stability. Conformism. Socio-centric culture. [Medieval kingdoms. “Feudalism”.]

**Orange:** Strive Drive. Effort. Pragmatism. Empiricism. Positivism. Scientism. Strategy. Competition. Dynamism. Growth. Success. Results. Achievements. Free market. Material goods. Consumerism. Individualism. Autonomy. Control. [National states. “Capitalism”.]

**Green:** Human Bond. Community Collaboration. Solidarity. Associative movements. Building of consensus. Relativism. Pluralism. Multiculturalism. The sensitive Self. Emotional communication. Feelings. Equality. Sense of injustice. Human rights. Feminism. Environmental awareness. Sustainability. Ecology.

**Yellow:** Flex Flow. Process integration. Systemic thinking. Complexity. Interdependence. Collaborative networks. Multiple realities. Open systems. Acceptance of uncertainty. Questioning mentality. Curiosity. Inquiry. Flexibility. Utility. Functionality. Spontaneity.

**Turquoise:** Holistic view. Global synthesis. Chaordic (chaotic-ordered) world. Fractal reality. Life as an unfolding of holoarchies. Spiral dynamics. Multiple levels interwoven into one conscious system. Communion with the whole. Understanding of universal harmony. Collective consciousness. Holographic connections. Transpersonal mentality. Cosmic spirituality.

Fig. 13 shows the successive vMememes (colours), both individually and collectively, illustrating the historical periods in which each began to emerge (increasing gradation of colour), the stages during which they dominated the collective panorama (continuous colour) and the phases during which their predominance waned (decreasing gradation of colour). The conclusions to be drawn from the graph are evident. On the one hand, we have said that spiral dynamics is expansive and therefore with each twist –transcending and integrating all previous stages–, its level of consciousness and ability to embrace greater complexity increases. On the other hand, we have found that the duration of the successive stages decreases, one

after another, at a dizzying rate, and that within a couple of centuries a moment of infinite creativity will thus be reached. At that moment, in that Singularity, consciousness will have transcended and included the entire spectrum of reality and will thus become manifest in the world of forms, the ever-present truth in the timeless Emptiness or Void: the non-duality of energy and consciousness, of object and subject, of origin and end.

Ray Kurzweil, one of the most prestigious researchers of technological acceleration, locates the moment of Singularity in 2045. He states that the non-biological intelligence created in that year will be a thousand million times more powerful than all human intelligence today. However, that does not seem to really be the true evolutionary summit, because, subsequently, in his book *The Singularity Is Near*, he states that our civilization will expand outward, turning all the dumb matter and energy that we comprise into highly intelligent (and transcendent) matter and energy. So, in a sense, we can say that the Singularity will eventually imbibe the universe with its spirit. Kurzweil specifies that we will manage to saturate the universe with our intelligence before the end of 22nd century and states “*Once we saturate the matter and energy of the universe with intelligence, it will ‘wake up’, be conscious, and sublimely intelligent. That’s about as close to God as I can imagine.*” Accordingly, it thus seems that the real evolutionary summit will not take place in 2045, but will occur in the late 22nd century, when all the energy and intelligence of the universe will be experienced in a unified way.

Seen in this way, the coincidence with my proposal seems quite clear, in terms of both date and content. As I suggest in this book, at the **beginning of the 23rd century** –around the year 2217– **energy** and **consciousness** will reveal their ultimate non-duality. According to Ray Kurzweil, at the **end of 22nd century**, all the **energy** of the universe will be saturated with intelligence and the Singularity will eventually imbibe this universe with its spirit. Doesn’t that all sound very similar?

#### **Addendum 5: Further coincidences (David J. LePoire)**

I have been fortunate to find recently some articles by American software engineer David J. LePoire, in which he investigates the global pattern of evolution, fundamentally in the fields of energy, the environment and technology. Although his starting point and final forecasts differ from my proposal, the coincidences between our respective analyses of the evolutionary process are truly surprising. Therefore, I do not wish to miss the opportunity to include in *Non-Dual Evolution* at least a reference to these suggestive coincidences with LePoire’s work.

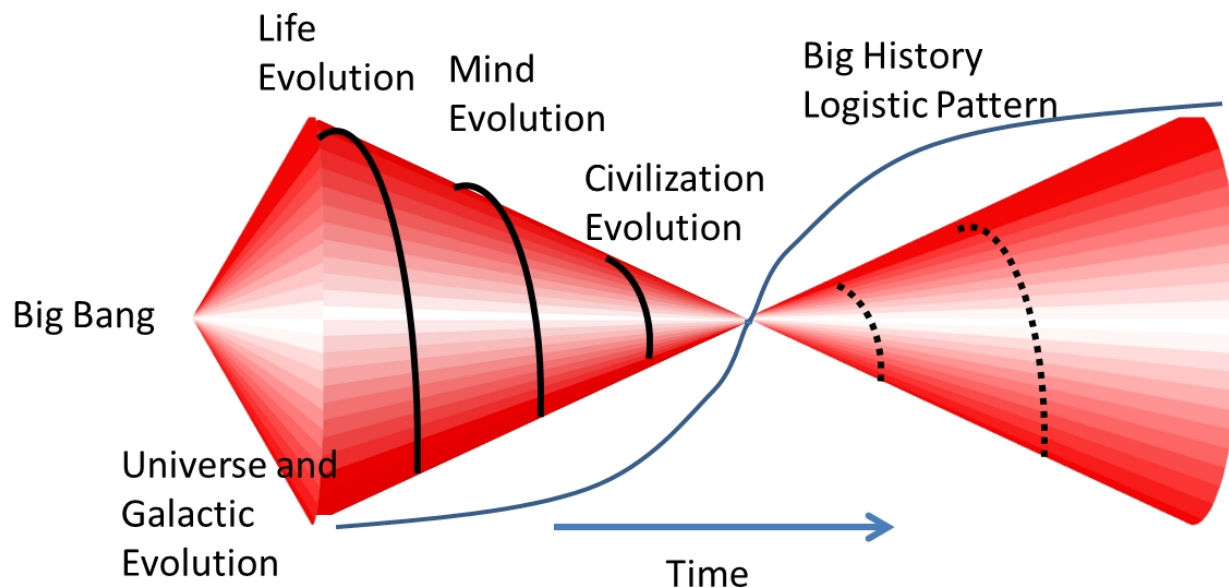
In the initial abstract of his article *Potential nested accelerating returns logistic growth in Big History*, Dave states the following:

*“The discussions about the trends in rates of change, especially in technology, have led to a range of interpretative models including accelerating rates of change and logistic progress. These models are reviewed and a new model is constructed that can be used to interpret Big History. This interpretation includes the increasing rates of the evolutionary events and phases of life, humans, and civilization. These three phases, previously identified by others, have different information processing mechanisms (genes, brains, and writing). The accelerating returns aspect of the new model replicates the exponential part of the progress as the transitions in these three phases started roughly 5 billion, 5 million, and 5,000 years ago. Each of these three phases might be composed of a further level of about six nested transitions with each transition proceeding faster by a factor of about three with corresponding changes in free energy flow and organization to handle the increased generation rate of entropy from the system. Nested logistic transitions have been observed before, for example in the ongoing exploration of fundamental physics, where the progress so far suggests that the complete transition will include about 7 nested transitions (sets of subfields). The reason for this number of nested transitions within a larger transition is not known, although it may be related to the initial step of understanding a fraction of the full problem.”*

In Table 1, LePoire describes, one by one, the different evolutionary stages, defined by the successive changes in energy flows [I indicate in brackets the correspondence with our evolutionary cycles]: Gravitational [Big Bang], Planet/Life [Formation of the Earth], Complex Cells [A-1], Cambrian [A-2], Mammals [A-3], Primates [A-4], Hominids [A-6], Humans [A-7], Speech [B-1], Fire [B-2], Eoadaptation [B-3], Modern Humans [B-4], Agriculture [B-5], Civilization [B-6], Commercial Revolution [B-7], Scientific/Exploration, Industrial [C-1], Information [C-2]. The parallelism is practically total!

Coinciding with our hypothesis, Dave proposes a temporal contraction factor between the successive evolutionary cycles of 3. He states, “A time contraction factor of about 3 is similar to time and energy contraction factors found by Snooks (2005) and Bejan and Zane (2012). [...] Note that just one time contraction factor was realized from the Big Bang to the beginning of life on Earth.” He then adds, “Alexander Panov (2011) also organized evolutionary history with 19 evolutionary crisis transitions with decreasing duration (by about a factor of 3). This is called the scaling law of evolution.”

In the article *Interpreting Big History as Complex Adaptive System Dynamics with Nested Logistic Transitions in Energy Flow and Organization*, LePoire represents the global dynamics of evolution by means of the following figure:



In the text he states, “The overall logistic of the Big History might be viewed as consisting of three spirals on one side of a double cone representing the evolution of **life**, **mind** and human **civilization** [see Figure]. Each spiral would consist of six to **seven nested smaller logistic growth phases with time durations decreasing by about a third**. The **astronomical period** before life began (i.e. 13.8 billion to 5 billion years ago) is a factor of **three times the duration represented in the cone**. This period was driven by gravitation and expansion as the universe’s temperature dropped, at first quickly but then slowing down. This can be represented by a cone pointed in the opposite direction. After the inflection point, a reflection in the duration of phases might occur.” The **bold lettering** is mine].

As can be appreciated, our descriptions of the overall pattern of evolution coincide practically totally. Dave talks about THREE spirals that represent the evolution of life, mind and civilization (recall our three series: “life”, “mind” and “intellect”), with SEVEN stages of smaller logistic growth nested in each one (recall the seven cycles that each of our series encompasses), the temporal duration of each stage being a THIRD of the preceding one (recall the length of 1/3 of our successive second harmonics). Moreover, the astronomical period is THREE times the duration represented by the three turns of the cone (as we have observed in our research). It is fascinating to see how the aforementioned paragraph by Dave is a perfect summary of the hypothesis we are proposing!

Nonetheless, it would also be appropriate here to add that LePoire's interpretation of the direction of the vertex of the evolutionary spiral differs from the one we are proposing in this book. Instead of foreseeing a final singularity of infinite creativity, as we have done, Dave predicts a simple inflection point in the evolutionary pattern, at which the accelerated process of evolution reverses its direction, thus initiating a gradual slowdown in the rhythm of transformations.

In the article *An Exploration of Historical Transitions with Simple System Dynamics Models*, Dave focuses his research on the six main social and technological transitions of human evolution, i.e. between hunter-gatherers [B-4], agricultural societies [B-5], early civilizations [B-6], market development [B-7], industrialization [C-1] and sustainable societies [C-2]. We have included in brackets the correspondences with our cycles, because, as can be seen, they coincide completely]. He states, "*The more recent periods arrive after shorter durations about 1/3 the time between the transitions. This factor of 3 is also an approximation for changes in accelerating periods for both natural biological evolution and cultural human evolution as well as this human historical revolution heavily influenced by technology*".

LePoire interprets the whole series of evolutionary stages as a chain of nested logistic curves (S), and points out, in each one of them, an "inflection point" —or change of curvature— at which the stage begins its decline at the moment of greatest creativity. These "inflection points" coincide precisely with the "second nodes" in each of our cycles, in which, as we have explained, the old paradigm reaches its peak and then starts to decline as the seed of a new model arises. To visualize these coincidences, we will indicate LePoire's proposals below in three specific cases that he cites in his article *An Exploration of Historical Transitions*:

In the section on "**agricultural societies**", he states in the text: "*The inflection point was about 9,000 years ago*" and Figure 9 clearly illustrates this change of curvature. (Recall that the "second node" of our cycle B-5 took place approximately 8,300 years ago).

In the section on "**early civilizations**", he states in the text, "*The inflection point of this process occurred at about 600 BCE which is known as the Axial Age*", the corresponding figure clearly illustrating this change of curvature. (Recall that the "second node" of our cycle B-6 took place approximately in the year 550 BCE).

In the section on "**industrialization**", he states in the text, "*Analysis of a different set of data show the peak in innovation per capita at around 1900*" and the corresponding figure clearly illustrates this change of curvature. (Recall that the "second node" of our cycle C-1 took place approximately in the year 1910 AD).

It is truly fascinating that the coincidences between our separate investigations not only refer to the overall list of cycles of evolution and history, but also include minor details such as the specific dates of the "inflection points" between these cycles. It is even more fascinating bearing in mind the different perspectives from which our work has been proposed. We are sure that the reader will be aware of the profound implications of these coincidences.

## Addendum 6: Toroidal evolution

Everything written so far has basically focused on unraveling the overall pattern of the evolution of life in the universe, in general, and the human being, in particular. As we have seen, the result of this integral research clashes head on with the predictions of the materialist paradigm of classical science. Surprisingly, however, ground-breaking lines of research have started to appear in recent years in different branches of science —physics, chemistry, biology, neurology, among others— that are clearly in tune with the world view that emerges from our evolutionary research and can hence provide key data capable of explaining this unexpected universal pattern that we are revealing here.

To show this suggestive harmony between different cutting-edge research in distinct fields of science, we will begin this addendum by outlining the fundamental characteristics of the universal dynamics that emerge from our inquiry into the rhythm of evolution. To this end, let us start out from the flat images represented in Figures 7-A and 7-B. These, we recall, summarized the overall pattern of universal evolution and the individual development of the human being from pole A (original energy) to pole  $\Omega$  (final consciousness).

On the vertical axis of these graphs, we represented the entire spectrum of energy-consciousness, from the base —with a maximum of energy and a minimum of consciousness— to the summit —with a minimum of energy and a maximum of consciousness—, with all the range of possible intermediate equilibria between these two fundamental facets of manifested reality, traditionally known as “the great chain of Being” and which can be summarized as the “matter-life-mind-soul-spirit” series. The horizontal axis of these graphs simply reflected the overall temporal scale, both of the universe and of the human being, from the origin (A) to the end ( $\Omega$ ).

Let's raise a couple of ideas at this point that we will develop further later. We observe that all manifested reality appears, inexorably, in the form of dualities —that no object can be found without a subject, or energy without consciousness— and that, as all opposites are mutually dependent, we can understand them as polar manifestations of a reality that transcends them and that it is “prior” to this dualization. We propose that the original quantum vacuum posed by physicists and the final mystical void experienced by contemplatives are the same and unique Void, perceived by physicists objectively and by contemplatives in a subjective way, but which, in itself, is neither objective nor subjective, but rather “prior” to this dual perspective. It is important to clarify that this Void does not allude to a distant metaphysical reality, but to the simple and pure Self-evidence of each present moment, which encompasses in itself all the manifestations of energy and consciousness that are observed in the spatiotemporal universe.

The other idea that we want to raise here refers to the fact that, as there is no separation between subject and object in the aforementioned Self-evidence and therefore it is not “something” that can be seen by “someone”, in order to manifest itself relatively, it needs to polarize in appearance as subject and object, just as 0 can dualize in 1 and -1 without changing —other than formally— its absolute value. We thus propose that, in its attempt to see itself, this Self-evidence apparently dualizes as an original pole (basically of energy) and a final pole (basically of consciousness), thus generating an illusory distance between the two, which, on vibrating —like the guitar string of our hypothesis— gives rise to a whole range of harmonics, which are precisely the levels of stability that the cycles of evolution that we have studied run through. We insist, however, that the presumed temporal distance between both poles is completely illusory, as in fact everything happens in the timeless Now of the ever present Self-evidence.

If we wish to graphically reflect these two ideas in the aforementioned Figures 7-A and 7-B —which, as we have seen, summarize the overall patterns of universal evolution and the individual development of the human being from the A pole of original energy to the  $\Omega$  pole of final consciousness— we need to perform a couple of maneuvers on the flat surface on which we have represented both graphs (see Fig. 14-A).

First, having proposed that energy and consciousness are not two different realities, but rather the objective and subjective aspects of the same and ever present Self-evidence, we should unify the horizontal lines at the bottom and the top of the graph. As we have stated, these respectively represent the levels of maximum energy and maximum consciousness that are one and the same in fundamental reality. To do so, it will suffice to fold the flat surface of the drawing in on itself, aligning the upper line with the lower one, thus obtaining a cylinder (see Fig. 14-B).

Then, having affirmed that the temporal distance between the original moment (A) and the final moment ( $\Omega$ ) is illusory —as everything happens in the timeless Now— we should also unify the vertical lines on the left and the right of the graph. As already stated, these respectively represent the original and final moments

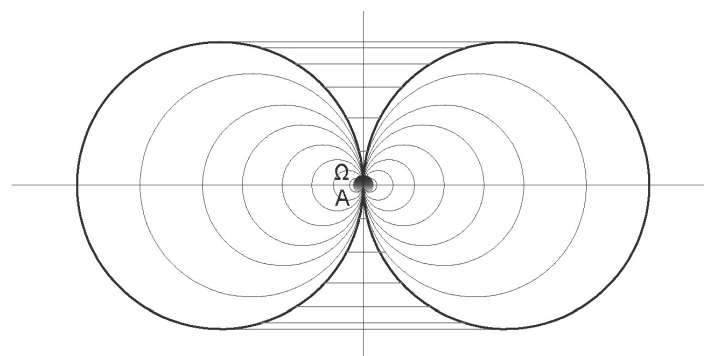
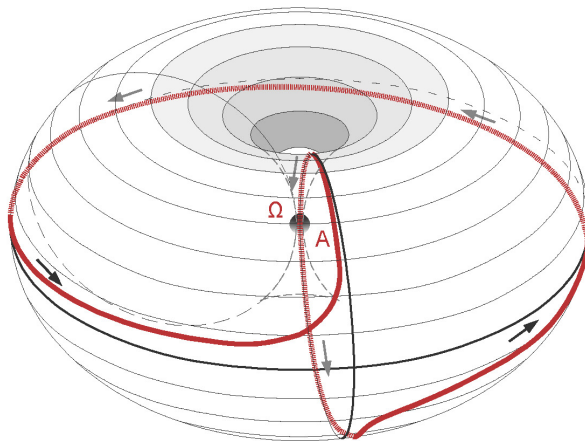
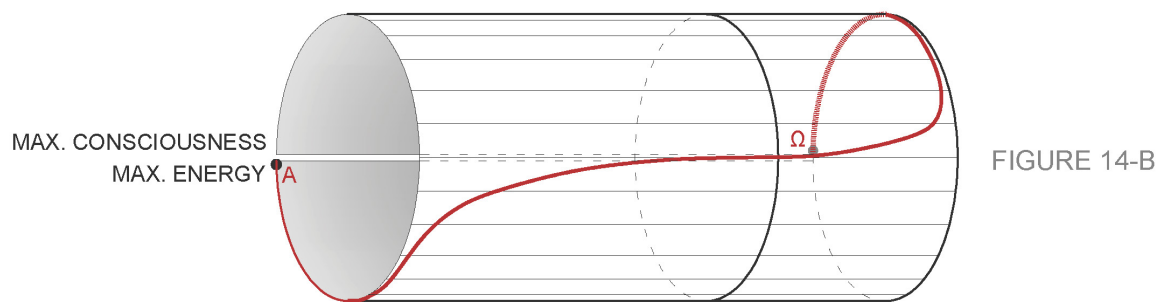
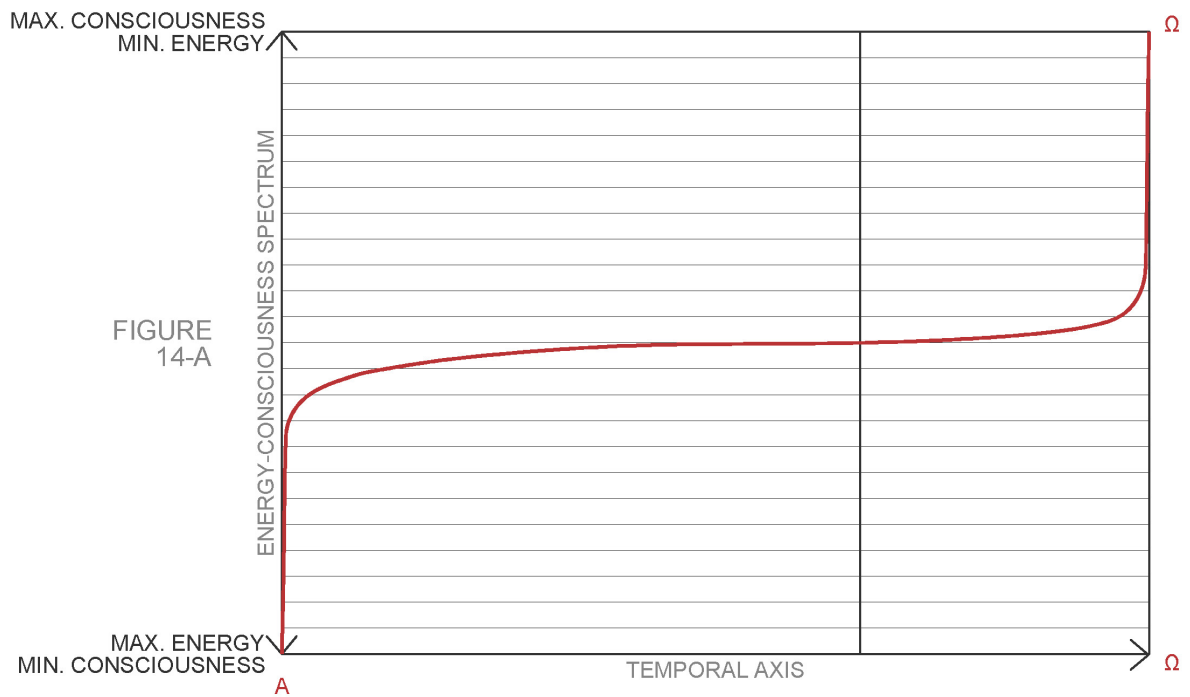


FIGURE 14

of all evolutionary and developmental processes. To do so, once again we will fold our cylinder over onto itself, until the extreme vertical lines coincide, thus obtaining a figure similar to a “doughnut” in which the central hole is reduced to a point without dimensions. It is what is called in geometry a “horn torus” (see Fig. 14-C).

Bearing in mind what we have just explained —taking the guidelines that have been revealed in our research to their ultimate consequences—, everything points towards a fascinating toroidal dynamic of energy-consciousness, both instantaneous and eternal, as the key element for integral comprehension of the universe. According to this scheme, the flows start out from a Center without dimensions —in its facet A—, follow a spiral path —divergent vortex—, reach the external surface of the torus, and return to the same Center —in its facet  $\Omega$ — via another spiral —convergent vortex—, to subsequently restart its endless process from there. Next, we will try to outline the fundamental aspects of this dynamic that is beginning to be glimpsed, as we are possibly on the verge of solving many of the enigmas and blind alleys in which official science and its obsolete materialistic paradigm are trapped.

From the outset, it is crucial to understand the ultimate meaning of the central point of the “horn torus” that we are proposing, as it is where the germ of everything else lies. As we have seen, this center is deduced, on the one hand, from the unified understanding of the infinite potential energy of the quantum vacuum and the unlimited pure consciousness of the mystical void, and, on the other, from the perception of the illusory character of time and hence of the absolute simultaneity of the original pole (A) and the final pole ( $\Omega$ ) of all processes. The center of this toroidal dynamic, which manifests itself as the spatiotemporal universe as a whole and as each and every one of the structures that compose it, is hence the same and unique non-dual Self-evidence, without form, unlimited, timeless, ineffable, both empty and full, the source and goal of all worlds, absolute potentiality. Let us insist once more, this non-dual center is one and the same in everything and in all, its true nature, its ultimate identity.

Accordingly, for this faceless, pure Self-evidence to contemplate itself, it needs to dualize —at least apparently— in the roles of eye and mirror, subject and object, because this allows it to update its infinite potential in the world of finite forms. In this way, as we have seen, the non-dual center, without ceasing to be so, manifests itself in polar form as the original source of energy and the final attractor of consciousness, generating an illusory temporal distance between both facets. Let us take a good look at this idea, because within it may lie the solution to many of the enigmas that science is encountering. The absolute Void, in which there is no trace of separateness, manifests itself dually in the world of forms, so that the presumed spatiotemporal distances that the “subjects” observe among the “objects” are, ultimately, purely illusory.

Previously we proposed that the vibration of the illusory “string” of energy-consciousness that is created between the A and  $\Omega$  poles, generated, from the very same original moment, a particular fundamental sound and a whole range of harmonics, which constituted the entire spectrum of potential archetypal levels, which, as we have seen, are updated, step by step, throughout evolution and history. We must now apply this very same multilevel energy-consciousness scheme that we proposed in the “string” of our hypothesis to the vibrant “torus” that, as we have proposed, generates the entire universal process. We will thus have a toroidal dynamic deeply nested in a myriad of levels —like a “matryoshka” or nested dolls—, from the tiny scale of Planck to the cosmic totality, thus reflecting the radical fractal structure of the universe (see Fig. 14-D). The fundamental characteristic of this fascinating nested torus lies in the fact that the center is common and identical in all its levels. Thus, all the universal flows, whatever the height of the energy-consciousness spectrum through which these unfold, start out from and end in this ineffable non-dual center that unites in itself the facets of both source —A— and receptacle — $\Omega$ — of all the worlds.

This fractal, toroidal structure of reality greatly facilitates the understanding of the evolutionary process. Thus, starting out from the idea that, in the final analysis, the sole protagonist of all the processes is the same and unique Self-evidence, we will now describe how the dynamics of evolution unfolds, step by step.

We stated earlier that the non-manifest Void apparently polarizes as subject and object to perceive itself subjectively-objectively in infinite ways. Via this artifice, Self-evidence can delve into the furthest corners of its own infinity —illusively and fleetingly identifying its absolute Here-Now with any relative point-instant of pixelated space-time and, from there, contemplate itself from a certain perspective —at any level of the energy-consciousness spectrum of the nested torus—, returning instantaneously to its original fullness. Given that, as we have stated, the temporal dimension is purely imaginary, everything in fact occurs from instant to instant. This exit and return, moment-by-moment, between the non-dual foundation and its finite and fleeting manifestation in space-time allows us to update in the relative world of forms the potential levels of stability of the energy-consciousness spectrum, i.e. the entire hierarchy of “harmonics” generated at the same original moment.

This recursive dynamic between the infinite Void and all its spatiotemporal forms is intrinsically creative and is facilitated by the unified field of memory that is gestating, step by step, at a fundamental level. All the information gathered at any point-instant of the manifested world is immediately introjected into this basic field of collective memory, whose potential is logically increased moment by moment. Thus, any entity, whatever the level of the spectrum in which it develops, has deep down in itself free access to the entirety of this unified field of memory, although it only connects with certain aspects of this field depending on its characteristics specific. The toroidal dynamic thus possesses a holographic structure, in the sense that each “part” of itself has information of the “totality”, and is, in fact, a particular reflection of that totality.

From the perspective that we are proposing here, the evolutionary process can be understood as a natural expression of a toroidal, integral, non-dual, fractal and holographic dynamic of fundamental energy-consciousness. Via this recursive dynamic, the ever present Self-evidence is focused, moment after moment, on the successive levels of the “harmonic” spectrum, beginning with the most basic ones —primarily energy— and ending at the highest levels —primarily consciousness—. On each plane, it updates the specific potential of that level, integrating it with the aspects that have already emerged in previous levels. In each turn, starting from the resources available in the unified field of memory, it is projected in each concrete situation of space-time, it perceives that determined situation according to the possibilities of its structure, and, immediately, introjects that information into the field of collective memory of the fundement. When a specific entity has unfolded the full potential of the stratum in which it basically develops and has integrated it with everything that has emerged in the preceding stages, once it has reached a specific level of complexity, it can resonate with the next “harmonic” of the energy-consciousness spectrum, and thus ascend to a new rung of the long ladder of evolution. And so on.

This toroidal, non-dual, fractal, holographic dynamic of the fundamental energy-consciousness that we are proposing has clear affinities with ancient intuitions of the wisdom traditions —the yin-yang of Taoism, the Celtic triskelion, the Egyptian seed of life, the Greek caduceus, the Hindu kundalini... even the symbol of  $\infty$  is no other than the cross section of a horn torus!—. However, as we have stated, it is practically unacceptable for the materialist paradigm of classical science. In the wake of the emergence of quantum physics and relativistic theory, the landscape has changed drastically, with numerous innovative proposals emerging throughout the past century that, in these first decades of the new millennium, have begun to crystallize into a ground-breaking unified theory of fields that, in many aspects, is in tune with the toroidal evolution we are proposing here. Below, we provide a brief recap of some of the work, carried out in very different fields, that has shone new light on the landscape of science.

First, it is important to recall the pioneering proposals on toroidal dynamics by **Walter Russell** —*The Universal One*—, **R. Buckminster Fuller** —*Synergetics*—, **Arthur M. Young** —*The Reflexive Universe*— and **Itzhak Bentov** —*A Brief Tour of Higher Consciousness: A Cosmic Book on the Mechanics of Creation*—. Concerning the creative trend of universal dynamics, it is necessary to mention **Jan C. Smuts’** “holism” —*Holism and Evolution*—, **Pierre Teilhard de Chardin’s** “Omega Point” —*Le Phénomène Humain*—, the notion of “syntropy” proposed by **Luigi Fantappiè** —*Principle of a unitary theory of the physical and biological world*— and **John A. Wheeler’s** “participatory anthropic principle”. As to the nested

character of the world, reference should be made to the concept of “holon” put forward by **Arthur Koestler** —*The Ghost in the Machine*—, that of “fractal geometry” proposed by **Benoît Mandelbrot** —*Fractal geometry of nature*—, and **Ken Wilber’s** “holoarchival evolution” —*Sex, ecology, spirituality*—. With respect to the holographic principle, it is essential to recall **David J. Bohm** —*Wholeness and the Implicate Order*— and his theory of the “holomovement” between deep reality or “implicate order” and superficial reality or “explicate order”, the “holographic brain” proposed by **Karl H. Pribram** —*Languages of the Brain*—, **Rupert Sheldrake’s** “morphogenetic fields” —*A New Science of Life*—, the “Akashic field” of information proposed by **Ervin Laszlo** —*The Akasha Paradigm: Revolution in Science, Evolution in Consciousness*—, and the work of **Gerard 't Hooft** —*The Holographic Principle*—, improved by **Leonard Susskind**. Regarding the relationship between the micro and macro scales, it is worth recalling the work in quantum neuro-bio-physics by **Stuart R. Hameroff** and **Roger Penrose** —*Consciousness in the universe: A review of the 'Orch OR' theory*—, and that by **Dirk K.F. Meijer** and **Hans J.H. Geesink** —*Consciousness in the Universe is Scale Invariant and Implies an Event Horizon of the Human Brain*—. We will finish this rapid list of research on the cutting edge of science that are in tune with some key points of our proposal, making special mention of the ground-breaking work by **Nassim Haramein** and his collaborators **William D. Brown** and **Amira Val Baker** —*The Unified Spacememory Network : from Cosmogenesis to Consciousness* [ <https://holofractal.org/spacememory.pdf> ]—, as their “Holofractographic Theory of the Unified Field” brilliantly integrates the fractal, holographic and toroidal approaches that define our hypothesis.

(There are currently numerous pages on the internet that echo this emerging perspective of a toroidal, holographic and fractal universe. Readers who are interested in this topic are recommended to consult the following websites: “The Fractal-Holographic Universe” by **Andreas Bjerve** [ <http://holofractal.net/> ], “Cosmometry” by **Marshall Lefferts** [ <http://cosmometry.net/> ] and “Volution Theory” by **Peter Merry** [ [www.volutiontheory.net](http://www.volutiontheory.net) ]).

## Addendum 7: Entropic-syntropic evolution

Following one of his surprising mathematical discoveries, Carl F. Gauss stated: “Now that I have the solution, I just need to find the logical process that leads to it.” In the present investigation, we find ourselves in a situation similar to that of Gauss. Throughout these pages, we have shown that, far from being a mere product of chance and meaningless, evolution follows a very precise rhythm of unfolding and folding between an original pole, basically of energy, and a final pole, basically of consciousness. How is this possible? What mechanism causes things to happen this way? So far, we have mainly limited ourselves to recounting some facts and to revealing the surprising pattern that links them. In this addendum, we will try to provide the key to explaining this mysterious behaviour of the evolutionary universe. As we will soon see, the transactional interpretation of quantum mechanics will provide us with the final clue.

Let us first delve a little into history to grasp the profound implications of the matter at hand. In the 1850s, the physicist and mathematician Rudolf Clausius established the concept of a thermodynamic system and postulated the thesis that in any energy transformation process, a small amount of energy is gradually dissipated across the system boundary. Energy thus gradually and irreversibly passes from a state of high potential and availability to a state of low potential and unavailability. Clausius coined the term “entropy” to refer to the physical magnitude that measures that amount of energy that is not reusable to do work and which is inexorably lost in the environment. The universe as a whole—which is an isolated system—tends to progressively distribute energy uniformly, increase its degree of homogeneity and disorder, and maximize entropy, and is therefore condemned to thermal death when it finally reaches the state of thermodynamic equilibrium. In this respect, the physicist Arthur Eddington affirmed that “*entropy is the arrow of time*”, as it forces physical events to move in a certain temporal direction, the one that is familiar to us, i.e. from the past to the future.

At the same time as Clausius was developing the science of thermodynamics, Charles Darwin was expounding the theory of evolution. Controversy was served! While according to the second law of thermodynamics the processes of energy transformation inevitably tend towards dissipation, uniformity, disorder and homogeneity, it turns out that, at the same time, the processes of biological evolution move in exactly the opposite direction, i.e., towards order, differentiation, complexity and organization. Could it be that evolution does not follow the principles of thermodynamics? The response from the currently dominant scientific paradigm is limited to clarifying that the second law is only applicable to closed and isolated systems, that complex systems are open—that is, they exchange matter and energy with their environments—and that, although they decrease the entropy in their interior—generating order among their components—they do so at the cost of increasing it around them. Note that this answer only indicates that *there is no contradiction* between the second law of thermodynamics and the appearance of complex systems, but it *does not explain* this appearance at all, nor does it explain their subsequent maintenance without degradation, and even less so, their progressive development towards higher levels of complexity and organization. Not to mention, of course, the harmonic rhythm in which this surprising display of creativity takes place, as we have seen in our research.

Given that classical thermodynamics has not been able to explain the creative dynamics of life, there have been numerous authors over the course of more than a century who have attempted to provide an answer, from very different perspectives, to the dilemma thus posed. Let us recall, for instance, the “*élan vital*” of the French philosopher Henri Bergson (1859-1941), the “*entelechy*” of the German biologist Hans Driesch (1867-1941), the “*synchronicity*” of the Swiss psychiatrist Carl Jung (1875-1961), the “*Omega point*” of the French palaeontologist Pierre Teilhard de Chardin (1881-1955), the “*negative entropy*” of the Austrian physicist Erwin Schrödinger (1887-1961), the “*negentropy*” of the French physicist Léon Brillouin (1889-1969), the “*general plan*” of the Hungarian physicist-chemist Michael Polanyi (1891-1976), the “*principle of syntropy*” of the Hungarian physiologist Albert Szent-Györgyi (1893-1986), the “*syntropy*” of the American architect Richard Buckminster Fuller (1895 -1983), the “*higher laws*” of the Hungarian physicist Eugene Wigner (1902-1955), the “*biotonic laws*” of the German physicist Walter Elsässer (1904-1991), the “*chreode*” of the British biologist Conrad Waddington (1905-1975), the “*stratified stability*” of the Polish mathematician Jacob Bronowski (1908-1974), the “*retrocausality*” of the physicist French Olivier Costa de Beauregard (1911-2007), the “*holomovement*” of the American physicist David Bohm (1917-1992), the “*dissipative structures*” of the Russian chemist Ilya Prigogine (1917-2003), the “*attractor*” of the American mathematician Edward Lorenz (1917-2008), the “*theory of catastrophes*” of the French mathematician René Thom (1923-2002), the “*fractal geometry*” of the Polish mathematician Benoît Mandelbrot (1924-2010), the “*Akashic field*” of the Hungarian systems theorist Ervin Laszlo (1932), the “*anthropic principle*” of the Australian physicist Brandon Carter (1942), the “*morphogenetic fields*” of the British biochemist Rupert Sheldrake (1942), the “*Feigenbaum numbers*” of the American mathematician Mitchell Feigenbaum (1944-2019), the “*self-organized criticality*” of the Danish physicist Per Bak (1948-2002), the “*Eros*” of the American integral philosopher Ken Wilber (1949) and so on. Yes; it would seem that there really is something more than entropy in this evolutionary universe.

Our research is clearly in tune with many of the proposals mentioned above, some of which are even very close to solving the issue raised at the beginning of this addendum. Let us recap the question: What mechanism in nature is capable of causing evolution, in counterbalance to the second principle of thermodynamics, to follow a very precise divergent-convergent spiral pattern between an original pole of energy and a final pole of consciousness? As we have stated, the transactional interpretation of quantum mechanics may provide us with the long-awaited answer. Let us now look at some approaches that point in this direction.

In 1940, the Italian mathematician Luigi Fantappiè (1901-1956) sought to find a unified theory of the physical and biological world that would explain the emergence of complex and organized forms in a universe dominated by entropy. He thought that the solution to this enigma had to be found in the fundamental principles of physics, in the very structure of the equations that combine quantum mechanics

and special relativity. A key equation in this field is the d'Alembert operator, which, in the relativistic Klein-Gordon generalization of the Schrödinger wave equation, admits two types of solutions: **divergent waves**, described by the so-called “retarded potentials”, that branch from the original emitting source, and **convergent waves**, described by the “advanced potentials”, that converge at a future point that acts as an absorber or attractor. On analyzing the mathematical properties of these two solutions, Fantappiè found that, while the positive solution moves forward in time and tends towards dissipation, disorder and homogeneity, the negative solution moves backward in time and tends towards concentration, order and complexity. He thus understood that the first solution actually follows the law of **entropy** —from the Greek *en* = divergent, and *tropos* = tendency— while the second obeys a symmetric law that he called **syntropy** —from the Greek *syn* = convergent, and *tropos* = tendency—. Observing that the properties of the law of syntropy were exactly those characteristics of living beings, Fantappiè concluded that the increase in complexity in the evolutionary process is a consequence of the advanced —retrocausal— waves that emanate from attractors located in the future and go backwards in time. That is why, he stated, “*advanced waves are the essence of life itself*”. Life is caused by the future.

We insist that, far from being a mere product of speculation, these retrocausal waves appear in a rigorous mathematical way when the fundamental equations of special relativity and quantum mechanics are studied jointly. What is truly surprising is that the researchers who made their theoretical discoveries later refused to accept their real existence, not for scientific reasons, but simply because of the preconception that the final causes were impossible. However, Luigi Fantappiè refused to eliminate half of the solutions of the fundamental equations of the universe and consistently argued that life is subject to a double causality: efficient causality and final causality. He thus proposed replacing the mechanistic and deterministic model of the universe with a new, entropic-syntropic model, in which the expansive forces (entropy) and the cohesive forces (syntropy) worked together, so that the unfolding of phenomena was not only a function of the initial conditions, but also depended on a final attractor.

One of Fantappiè's main students, the physicist Giuseppe Arcidiacono (1927-1998), together with his twin brother Salvatore (1927-1998), a chemist by profession, re-examined the unitary theory of the physical and biological world of their mentor in order to clarify the separation established between entropic and syntropic phenomena. They proposed a new version of the theory in which they argued that there are actually no “pure” entropic or syntropic events, but that there exist both entropic and syntropic components acting together, in all phenomena, whether physical or biological. The result is an entropic-syntropic model of the universe with a “cybernetic structure” that makes it possible to establish a link between Fantappiè's unitary theory and the most recent research on systems theory, chaos and complexity.

Without knowledge of Fantappiè's work, the Italian experimental psychologist Ulisse Di Corpo (1959) independently formulated the theory of syntropy in 1977 from a slightly different starting point. Instead of starting from the d'Alembert operator of the wave equation of quantum mechanics, as Fantappiè had done, he began by working with the original and complete energy-momentum-mass equation of Einstein's special relativity:  $E^2 = p^2 c^2 + m^2 c^4$ , where  $E$  is energy,  $p$  is momentum,  $m$  is mass, and  $c$  is the constant for the speed of light. As this is a second-degree equation, it always has two solutions: one positive and one negative. The positive solution describes energy that diverges forward in time from a past source, while the negative solution describes energy that diverges backward in time from a future source. At the time, this second solution was considered unacceptable because it implied retrocausality, i.e. the effect took place before its cause. Einstein managed to solve this problem by considering that momentum,  $p$ , is practically equal to zero, because the speed of physical bodies is extremely small compared to the speed of light. In this way, the complex Einstein equation of energy-momentum-mass was simplified into the now famous equation  $E=mc^2$ , which has only one positive solution.

However, in 1924, the Austrian theoretical physicist Wolfgang Pauli discovered the spin of electrons. Spin is an angular momentum, a rotation of the electron on itself at a speed close to the speed of light. Thus, in this case, momentum,  $p$ , cannot be considered equal to zero and therefore the energy-momentum-mass

formula must be used in its full version. For this reason, in 1928, when combining Einstein's special relativity with quantum mechanics, the British theoretical physicist Paul Dirac applied the complete energy-momentum-mass equation to the study of electrons and once again encountered the unwanted dual solution —positive and negative— in the form of electrons and their antiparticles. The Dirac equation thus leads to a universe made of matter moving forward in time and antimatter moving backward in time. The antiparticle of the electron, predicted theoretically by Dirac, was observed experimentally in 1932 by the American physicist Carl Anderson —by photographing the traces of cosmic rays in a cloud chamber— and was given the name *positron*. Anderson thereby became the first person to empirically prove the existence of the negative energy solution and waves that propagate backward in time, from the future to the past. The negative solution was thus no longer an impossible mathematical absurdity, but became empirical evidence. We now know that each subatomic particle has a corresponding antiparticle that flows in the opposite direction of time, from the future to the past: antielectrons, antiprotons, antineutrons and so on.

The meeting between Ulisse Di Corpo and the cognitive psychologist Antonella Vannini, in 2001, relaunched research on the entropic-syntropic theory. [Some of the information contained in this addendum is taken from the *Syntropy Journal* digital publication —<http://www.sintropia.it/journal/index.htm>— edited by Ulisse and Antonella since 2005]. At the time, Fantappiè was not able to devise a way to reveal the existence of future causes in the laboratory. In recent decades, however, a growing number of studies —by Dean Radin, Dick Bierman, James Spottiswoode, Patrizio Tressoldi, among others— have demonstrated the existence of prior reactions to stimuli in the parameters of skin conductance or cardiac frequency. For her part, in her doctoral work, Vannini managed to carry out four experiments using heart rate measurements to study Fantappiè's proposal regarding retrocausality and António Damasio's learning effect. The hypothesis on which she worked was very simple: if life is supported by syntropy, the parameters of the vital systems that support life, such as the autonomic nervous system, should show retrocausal activations. Her thesis provided ingenious methodologies and positive experimental results that succeeded in turning syntropy studies from a mere hypothesis into a sound scientific theory supported by rigorous mathematics and abundant experimental evidence.

Around 1940, the American theoretical physicists John A. Wheeler (1911-2008) and Richard Feynman (1918-1988) proposed what is known as “absorber theory”, which is an interpretation of electrodynamics that derives from the assumption that the solutions of the electromagnetic field equations must be invariant under time inversion symmetry. It is hence a symmetric theory in time. In general, Maxwell's equations and the equations of electromagnetic waves have two possible solutions: a retarded solution —moving forward in time— and an advanced solution —moving backward in time—. In principle, there is no apparent reason for the breaking of time reversal symmetry, pointing to a preferential direction of time. Nonetheless, advanced solutions are normally ruled out in the interpretation of electromagnetic waves. In absorber theory, however, charged particles are considered both as emitters and absorbers, and the emission process is related to the absorption process in the following way: both the retarded waves that travel from the emitter to the absorber and the advanced waves that travel from the absorber to the emitter are taken into consideration; the sum of the two, however, results in causal waves, although retrocausal solutions are not ruled out a priori.

From the start, the traditional interpretation of quantum mechanics —the Copenhagen interpretation— has shown a fierce reluctance to accept negative solutions as actually existing, i.e. those that move backwards in time, which naturally follow on from the fundamental equations. Diverse research over the last century has shown, over and over again, the major difficulties of this standard interpretation in assuming certain empirically contrasted phenomena, such as non-locality, entanglement and retrocausality. This led the American physicist John G. Cramer (1934) to propose an alternative interpretation in 1986, which he called the Transactional Interpretation of Quantum Mechanics (TIQM). Inspired by Wheeler and Feynman's “absorber theory”, the transactional interpretation describes quantum interactions in terms of a **standing wave formed by interference between retarded (forward in time) and advanced (backward in time) waves**. It is a “pure” interpretation of quantum mechanics, in the sense that it does not add anything ad

hoc, but simply provides a physical referent for a part of the mathematical formalism used in standard textbooks —advanced waves— that the traditional interpretation has repeatedly eliminated. Its predictions are therefore the same as those of the Copenhagen interpretation, but nevertheless it avoids many of its problems and solves, in a simple and elegant way, all the great quantum mysteries, such as the EPR paradox, Schrödinger's cat, Wigner's friend, Wheeler's retarded solution, etc. This model thus provides a clear visual picture that explains, without any artifice, the puzzling experimental results that appear daily in quantum physics laboratories around the world. According to the astrophysicist and science writer John Gribbin, Cramer's interpretation of quantum mechanics "*provides the best complete picture of how the world works at the quantum level*", and, "*hopefully, it will replace the Copenhagen interpretation as the standard way of thinking about quantum physics for the next generation of scientists*".

This transactional model may be summarized as follows. The emitter produces a retarded wave of "offer", forward in time, which travels towards the absorber, causing the absorber to produce an advanced wave of "confirmation", backward in time, which travels back to the emitter. The interaction is repeated cyclically until the net exchange of energy, momentum, angular momentum and other conserved quantities satisfies the quantum boundary conditions of the system, at which point the transaction is definitively completed and the real quantum event, the "collapse of the wave function", occurs. Of course, the "pseudo-temporal" sequence in this account is only a semantic convenience to describe a process that is actually timeless, given that, according to the laws of relativity, time does not pass at all from the point of view of waves, because, as they travel at the speed of light, their moment of departure and their moment of arrival are one and the same moment. An observer unaware of these internal mechanisms of nature would perceive only the completed transaction, which could be reinterpreted as the passage of a single retarded photon —i.e. positive energy— traveling at the speed of light from an emitter to an absorber. In a more simplified version, we could say that the emitter produces an "offer" wave that travels to the absorber, that the absorber then returns a "confirmation" wave to the emitter, and that the transaction is finally completed with a "handshake" —a standing wave— through space-time, via which a bidirectional contract is sealed between past and future. As Cramer states "*This universe (...) advances in time at the quantum level through a chain of handshakes between the past and the future (...) The future goes back to make an accommodation with the past that allows a quantum event to happen, to become reality. Each quantum event emerges into reality as a result of a feedback loop between the past and the future. These are allowed time-shaped loops that give rise to the universe*".

Extending the work of John Cramer, the American physicist and philosopher of science Ruth E. Kastner (1955) has developed a new Transactional Interpretation, called Relativist Transactional Interpretation (RTI) or Possibilist Transactional Interpretation (PTI), which holds that quantum wave functions do not move in the physical universe, but exist as "possibilities" in Hilbert's multidimensional space, from which transactions emerge in the "real" universe. Kastner proposes considering the outgoing offer waves and the many incoming confirmation waves as "possible" transactions, existing outside of space-time, of which only one becomes empirically "real". She suggests defining them with the term "potentia" —with which Aristotle called the ability to be something in the future—, in tune with the statement by the German theoretical physicist Werner Heisenberg: "Elementary atoms or particles are not real in themselves; they form a world of potentialities or possibilities, and not so much a world of things or of facts or data". In this sense, Kastner states that offer and confirmation waves are sub-empirical and pre-space-time "possibilities", i.e. they have not yet appeared in space-time, and therefore calls them "incipient transactions".

Kastner calls for a new metaphysical category to describe those "not quite real possibilities" which, far from being mere abstractions, constitute a higher-dimensional world whose structure is described by the mathematics of quantum theory. She raises the need to consider such "possibilities" as part of a reality that encompasses much more than what is contained in space-time. In fact, space-time events, the events of the concrete world that we experience around us with our five senses, are products that emerge from the transaction processes —timeless and non-local— that take place in the quantum realm. The "iceberg" metaphor used by Freud to describe the human subconscious can equally be applied to Kastner's

“ontological realm of possibility” or “quantumland”. “Quantumland” refers to the mass of the iceberg that exists beyond our sight, while the tip, the space-time appearance, is only a small part of everything that is the physical universe. Although they take place outside of space-time, quantum processes constitute a fundamental part of that universe.

At the beginning of this addendum, we wondered how it was possible for evolution to follow such a precise unfolding and folding rhythm between the original and final poles, as has been shown throughout this research. And we asked the question: Is there some natural mechanism capable of causing things to happen in such an unexpected way? We thus suggest that we may find the long-awaited answer in the so-called Transactional Interpretation of Quantum Mechanics. For this reason, in the previous paragraphs we have summarized the basic points of Luigi Fantappiè’s entropic-syntropic theory, on the one hand, and of John Cramer’s transactional interpretation, on the other. Next, we shall recall some fundamental ideas of our “non-dual evolution” to then consider how Fantappiè and Cramer’s proposals provide us with the definitive key to explaining the mysterious evolutionary pattern.

As we have previously seen, all manifested reality inexorably appears in the form of dualities —there is no object without a subject, no energy without consciousness, or outside without inside— and, as all opposites are mutually dependent, we can understand them as polar manifestations of a reality that transcends them and that is “prior” to said dualization. We hence proposed that the original quantum void posed by physicists and the final mystical void experienced by contemplatives are no other than one and the same Void, perceived by physicists objectively and by contemplatives subjectively, but which, in itself, is neither objective nor subjective, but “prior” to this dual perspective. Finally, we clarified that this Emptiness does not refer to a distant metaphysical reality, but to the simple and pure Self-evidence of each present instant, which encompasses in itself all the manifestations of energy and consciousness that are observed in the space-time universe. According to this perspective, ultimate reality is hence not solely energy, as the materialists claim, nor solely consciousness, as the spiritualists claim, but the ineffable non-duality of these two apparent facets. The universe, dear reader, is made up of the simple and evident Presence that you are in this precise timeless moment that is Now and always Now.

We have also stated that, as there is no separation between subject and object in this absolute Self-evidence, and therefore it is not “something” that can be seen by “someone”, in order to manifest itself relatively before itself it needs to be polarized in appearance as subject and object, in the same way that 0 can dualize into +1 and –1 without changing its intrinsic value. For this reason, we proposed that, in its attempt to see itself, Self-evidence apparently dualizes as an original pole (basically of energy) and a final pole (basically of consciousness), thus generating, in the same primordial moment, an illusory distance between the two, which, on vibrating —like the guitar string in our hypothesis— gives rise to a whole range of harmonics, which are precisely the “potential levels of stratified stability” (Bronowski) that will be successively updated through the cycles of the evolution that we have studied, covering the entire spectrum of reality from the most basic strata —of enormous energy and little consciousness— to the highest —of little energy and enormous consciousness—.

It is also important to understand that everything happens in the absolute Now and that time is simply an imaginary construction with which our minds order the emergence of successive relative instants. For this reason, when we use the terms “past” or “future”, we are not talking about distant situations, but are only referring to partial aspects of the immutable timeless Now that contains in itself the totality of “time”. We stated a moment ago that the unmanifested Emptiness is apparently polarized as subject and object so as to perceive itself subject-objectively in infinite ways. Via this ploy, Self-evidence can delve into the furthestmost corners of its own infinity —fleetingly identifying its absolute Here-Now with any relative point-instant of pixelated space-time—, in order to contemplate itself from a certain perspective from there —at any level of the spectrum of energy-consciousness—, immediately returning to its original fullness. The time dimension is thus purely imaginary. Everything actually happens from moment to moment. This departure and return instant after instant between the non-dual foundation and its finite and fleeting

manifestation in space-time allows the *potential* levels of stability of the energy-consciousness spectrum to be *actualized* in the relative world of forms, i.e. the entire hierarchy of standing waves —musical harmonics— generated at the same original instant. For an integral understanding of the universe, we will thus have to refer to three different, although dynamically interrelated, facets: **non-dual absolute reality** —the simple and timeless Self-evidence without form—, **potential relative reality** —the potential spectrum of energy-consciousness generated in the original polarization— and **space-time relative reality** —the actualization moment after moment of the successive potential levels of stratified stability—.

In Figure 15 we have once again represented the complete pattern of the unfolding-folding process between the original pole of energy —A— and the final pole of consciousness — $\Omega$ —, as it manifests itself in global evolution and in the individual development of the human being. Let us recall that this trajectory can locate its “fundamental sound” at any level of the energy-consciousness spectrum, as we stated previously in figure 7. Precisely, in this graph we see that the inflection point —P— of the trajectory takes place on the border between the “material” and the “vital” levels in the case of human *phylogeny*, and between the “mental” and the “soul” levels in the case of our *ontogeny*. As we have stated in the previous paragraph, given that each point-instant of the relative world is born and returns, moment after moment, from and towards its timeless foundation, we can also affirm that this complete unfolding-folding trajectory similarly reflects the whole life of each moment —what Ken Wilber calls *microgeny*—, which can be focused on any level of the energy-consciousness spectrum, from the most physical to the most spiritual planes.

At the bottom of Fig. 15, we highlight the resonance between our evolutionary scheme —the unfolding-folding fractal pattern between pole A and pole  $\Omega$ — and the proposals of Fantappiè —regarding the entropic-syntropic (divergent-convergent) dynamics between the original source and the final attractor— and Cramer —regarding the “handshakes” of retarded “offer” waves and advanced “confirmation” waves between emitters and absorbers. Herein lies the answer to the question we posed at the beginning of this addendum as to what natural mechanism can cause the evolutionary pattern to unfold in such an unexpected way. The entropic-syntropic theory and the transactional interpretation make it clear to us that **all the events of the space-time universe arise, moment after moment, via the simultaneous and coordinated action of flows from the actualized “past” and the potential “future”, and, ultimately, from the original emitter and final absorber.** In this sense, we could complement Einstein’s phrase about “*God does not play dice with the universe*”, stating that he does, but that he only counts the winning moves. That is, of all the potential offer waves from the past, only those that are in resonance with the confirmation waves from the future are updated in space-time. This, in turn, brings to mind Teilhard de Chardin’s idea about “*the preferential utilization of chance*”.

This approach greatly clarifies the so-called “anthropic principle”, which suggests that we live in a carefully adjusted universe, i.e., in a universe that seems to have been meticulously arranged to allow the existence of life and mind, because, if any of the basic physical constants had been different, the appearance of life as we know it would not have been possible. If, as we see here, all the events of the universe arise from the interaction and consensus between the past and the future, it is completely natural that, without having to resort to any external designer, the first events of the universal process were already fully coordinated and adjusted to future events. How could it be otherwise! In the same way, with respect to our divergent-convergent pattern, we must state that all the successive levels of the evolutionary ladder —which, as we saw in our research, unfold at the rate set by the second harmonic— are defined, like all quantum interactions, by **standing waves formed by interference between retarded (forward in time) and advanced (backward in time) waves**, which is precisely the core of Cramer and Kastner’s transactional interpretation!

From the perspective of the mechanistic paradigm, our proposal regarding a fractal pattern of unfolding-folding between the original and final poles in the evolutionary process is complete nonsense. However, as we have just seen, from the syntropic and transactional perspective, this pattern is precisely the most

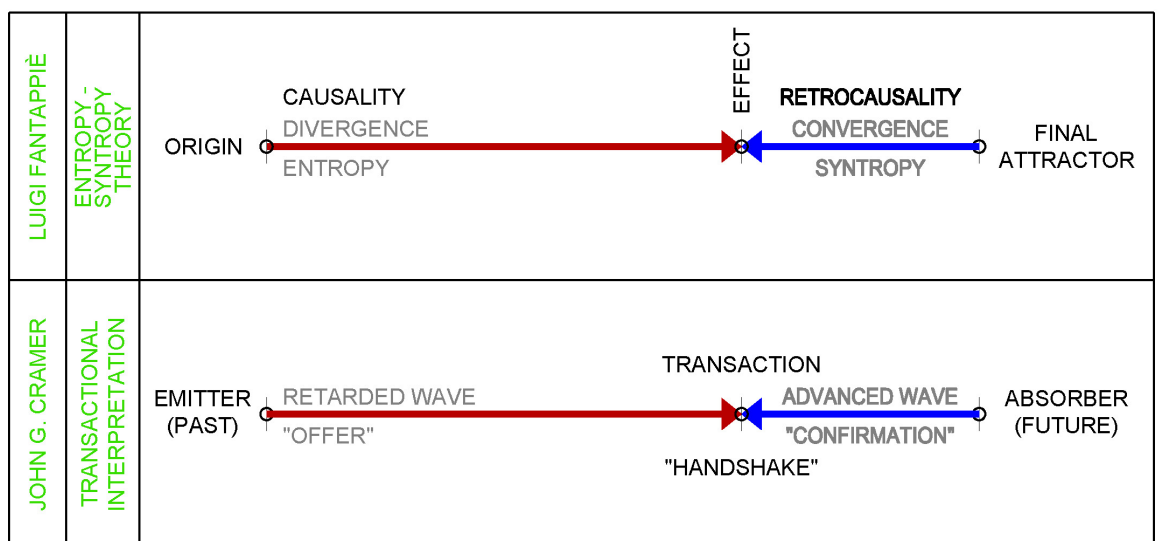
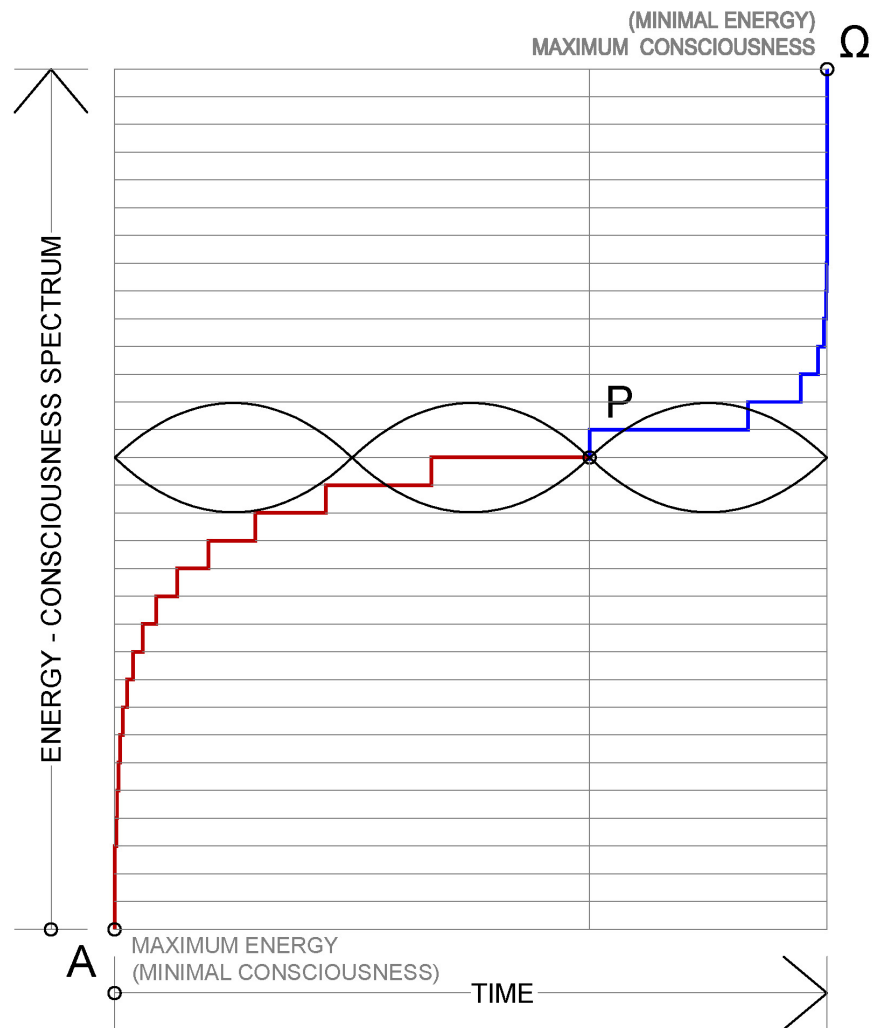


FIGURE 15

natural, coherent expression with respect to the intrinsic simultaneously causal and retrocausal mechanism of the universe. Materialism has tried to understand the world by dispensing with half of it and has failed in its attempt to explain life, mind or consciousness. It has sufficed to take reality in its entirety in order to shine light on all areas of the panorama. Isn't it time to change the paradigm?

## Addendum 8: The evolutionary dance of Emptiness

*"Time is a moving image of eternity that progresses in a circle" (Plato)*

*"The now that passes produces time, the now that remains produces eternity" (Boethius)*

In this addendum we are going to recapitulate and develop some of the fundamental points that have been appearing throughout these pages. We trust that, by presenting them in a unified way, we will be able, in the end, to outline a truly comprehensive panorama of the creative dynamics of reality, capable of clarifying, with simplicity and without artifice, many of the great questions that humanity has asked itself since always and to which materialistic science has not been able to respond.

In a previous addendum we have stated that, in order to achieve a truly integral understanding of everything exposed throughout our research, it is absolutely necessary to refer to at least three different facets of the All-One: A) **non-dual absolute reality**, B) **potential relative reality** and C) **spatiotemporal relative reality**. Next, we will try to specify the meaning of each of these expressions.



### A) Non-dual absolute reality

All manifested reality appears, inexorably, in the form of dualities. It is not possible to find subject without object, inside without outside, origin without end... Nor vice versa. Therefore, since all opposites are mutually dependent, we can understand them as polar manifestations of a reality that transcends them and that is "prior" to that dualization.

Physicists speak of infinite potential energy in the original quantum void, and sages speak of infinite transparent consciousness in the final mystical void. Our proposal—in tune with the great non-dual wisdom traditions—is that these two voids are the same and unique Emptiness, perceived objectively by physicists and subjectively by contemplatives, but which, in itself, is not neither objective nor subjective, but "prior" to that dual perspective. Since in that Emptiness there is no separation between subject and object, it is not possible to see it in any way, because it is not "something" that can be seen by "someone", but, obviously, it is not "nothing" either, because, in fact, all the entities of the universe—objective or subjective—are nothing other than partial and relative forms of that non-dual Void. Although, strictly speaking, it is therefore not possible to make any statement about essential Emptiness, as an approximation we will suggest that it is, in an undifferentiated way, potential energy and pure consciousness, that is, non-dual lucid-light or luminous-lucidity.

Positivist science will never be able to access this intrinsically ineffable Void, since the mere attempt to describe it objectively places the researcher "outside" of its non-dual scope. However, paradoxically, the Void we are talking about, far from being a distant, mysterious or unknown reality, is the closest, most intimate and obvious experience of our existence. Is there something more unquestionable than the **Certainty-of-Being** itself?... Is it that, dear reader, do you doubt for a single moment of your own reality?... Well, it turns out that this simple and pure ever present **Self-Evidence** that you are in your essence —prior to the slightest identification with any concrete form— is, precisely, the non-dual Emptiness that constitutes and comprehends all worlds. That simple Self-Evidence is the only substance of the universe as a whole and of each and every one of the entities that compose it!

The universe is not made only of energy —as the materialist monists claim—, nor just of consciousness —as the idealist monists claim—, but of the "prior" non-dual Emptiness that includes and transcends both facets. This statement clearly coincides with Baruch Spinoza's idea that the entire universe is made of a single substance —which he called "God" or "Nature"— which appears under two attributes: extension (matter) and thought (mind). Or, in the same way, with Friedrich Schelling's approach that the supreme principle must be an absolute that is at the same time object and subject, nature and spirit, that is, the unity, identity or indifference of both aspects. Perspectives similar to these are currently beginning to be suggested with increasing insistence, in many different fields of research, under the names of "dual-aspect monism" and "neutral monism." Thus, in the words of the German physicist Harald Atmanspacher: "dual aspect approaches consider the mental and physical domains of reality as aspects, or manifestations, of an underlying undivided reality in which the mental and the physical do not exist as separate domains. In such framework, the distinction between mind and matter results from an epistemic split that separates aspects of underlying reality."

We propose, therefore, that the non-dual Emptiness, devoid in itself of any particular qualification or determination, is, at the same time, the ultimate essence of all existence, the pure, undifferentiated and formless matrix that sustains all worlds. There is no specific characteristic, concrete appearance or distinctive feature in it, but it is not a mere absence or absolute negation, but rather a state of unlimited, omnipresent and indestructible openness that "makes" the entire universe of finitude. A diaphanous, lucid and luminous realm that generates, sustains and embraces the entire universe of particularities. An infinite and limitless spaciousness, eternally self-evident, from which all the phenomena that take place in space-time arise, are in and return to.

The ultimate Void is a non-state in which nothing concrete can be perceived, but which is pregnant with everything that exists. Its absolute simplicity is infinite potentiality of all things. Where there is nothing, there is a place for everything. It is not, therefore, an impotent nothingness, but rather, on the contrary, it can make everything out of itself, remaining in its intimate bosom as eternal Emptiness. All things come from it, are in it, and return to it, but behind these fleeting forms, it remains immutable in its timeless stillness, now, in the beginning, and forever. Beyond the change. Beyond birth and death. Ever present in his infinite game of dual appearances. Eternally empty and clear. Timelessly self-evident.

## **B) Potential relative reality**

Since non-dual Self-Evidence is completely devoid of the slightest separation between subject and object, it cannot formally perceive itself in any way. Therefore, if it wants to contemplate itself, it has no choice but to dualize... at least in appearance. The artifice is simple. Just as 0 can unfold as + 1 and – 1 without changing its value at all, fundamental Emptiness can unfold as object —an original pole, basically of energy— and subject —a final pole, basically of consciousness—, fully maintaining its empty essence. Between both poles, in this way, a wide spectrum of balances is generated between both polar facets,

which covers the entire range from the most basic states —of enormous energy and little consciousness— to the highest —of little energy and enormous consciousness. When this illusory distance of energy-consciousness generated between both poles enters into vibration —like a guitar string— a characteristic fundamental sound and all its unlimited range of harmonic sounds (standing waves) are instantly produced. This means that, let's take a good look, from the very originary moment the entire spectrum of energy-consciousness is already fully present in an intertwined and resonant way.



As we have seen throughout our research, the successive second harmonics that arise with the vibration of the original "string" of energy-consciousness —the successive notes of the Pythagorean circle (spiral) of fifths— are precisely the potential levels of stratified stability that will be actualized, one after the other, along the successive evolutionary rungs that we have analyzed, and that will unfold rhythmically the complete spectrum of manifestation, from the most basic levels —of enormous energy and little consciousness— to the most high —of little energy and enormous consciousness. (It is suggestive to point out the parallelism between the hypothesis that we are exposing and the "string theory" currently proposed in theoretical physics, although in our case the field of application is not simply reduced to the world of microphysics, but rather covers the entire spectrum of reality. It is difficult to try to elaborate a "theory of everything" if practically the entire manifested evolutionary reality is marginalized!).

We would like to highlight here the hypothesis raised by the pharmacologist Dirk Meijer and the researcher Hans Geesink about a mathematical algorithm for coherent quantum frequencies that generate stability in both animated and non-animated systems. In their own words: "Interestingly, we found that the origin of the particular biological algorithm can be mathematically approached by a selected "tempered Pythagorean" reference acoustic scale. The algorithm expresses one-dimensional wave equations known for vibrating strings. The origin of the biological algorithm was condensed in a mathematical expression, in which all frequencies have ratios of 1:2 and closely approach ratios of 2:3." This 2:3 ratio is precisely the "second harmonic" that, as we have seen in our research, generates the evolutionary stability levels!

Returning to our discourse, when fundamental Emptiness unfolds as an objective pole (basically of energy) and a subjective pole (basically of consciousness), a bidirectional tension is automatically produced between both extremes: an expansive and entropic current coming from the initial pole of "**energy-**(consciousness)" and a contractive and syntropic current coming from the final pole of "**consciousness-**(energy)". Both flows travel, in opposite directions, the entire spectrum of potential levels of stability —standing waves— in which both polar facets are balanced in different proportions. Moment after moment, these ascending and descending flows resonate with each other at a certain level —standing wave— of the energy-consciousness spectrum, "collapsing", thus, in a concrete event.

(Readers interested in this point can consult the suggestive works on the "participatory anthropic principle" by John Wheeler, on "creative evolution" by Amit Goswami, or on "biocentrism" by Robert Lanza, and thus verify the similarities and the differences between these interpretations of quantum mechanics and what we are exposing here).

The proposal that we are developing is clearly in tune, obviously, with the syntropic theory of the mathematician Luigi Fantappiè. This theory affirms that the increase in complexity in the evolutionary process is a consequence of advanced waves that emanate from attractors located in the future and that go backwards in time. Thus, he proposes going from a mechanistic and deterministic model of the universe to a new model, entropic-syntropic, in which the expansive forces (entropy) and the cohesive forces (syntropy) work together, so that the unfolding of the phenomena is no longer only a function of the initial conditions, but also depends on a final attractor. This theory was later updated by the physicist Giuseppe Arcidiacono and by his twin brother Salvatore, a chemist by profession, developing an entropic-syntropic model of the universe with a "cybernetic structure", which makes it possible to establish a link between Fantappiè's unitary theory and the latest research on systems theory, chaos, and complexity. Currently, psychologists Ulisse Di Corpo and Antonella Vannini have relaunched research on entropic-syntropic theory, carrying out laboratory experiments with convincing results and thus managing to convert the syntropy hypothesis into a solid scientific theory supported by rigorous mathematics and abundant experimental evidence.

In clear resonance with all this, our approach is likewise very similar to the Transactional Interpretation of Quantum Mechanics—proposed by John Cramer and inspired by the "absorber theory" by John Wheeler and Richard Feynman—which describes the quantum interactions in terms of a standing wave formed by the interference between retarded (forward in time) and advanced (backward in time) waves. We can summarize this transactional model as follows: The emitter produces a retarded "offer" wave, forward in time, which travels towards the absorber, which causes the absorber to produce an advanced "confirmation" wave, backwards in time, which travels back to the emitter. The interaction is repeated cyclically until, finally, the transaction is completed with a "handshake"—a standing wave—through space-time, sealing a two-way contract between the past and the future, and produces the actual quantum event, the "collapse of the wave function". The "pseudo-temporal" sequence of this story is, of course, just a semantic convenience to describe a process that is, in truth, timeless. We will return to this matter later.

Physicist and philosopher Ruth Kastner, extending the work of John Cramer, has developed a new Transactional Interpretation, called Relativistic (RTI) or Possibilistic (PTI), which holds that quantum wave functions do not move so much in the physical universe, but rather that they exist as "possibilities" in the multidimensional Hilbert space, from which transactions in the "real" universe emerge. Kastner proposes to regard the outgoing supply waves and the many incoming confirmation waves as "possible" transactions, existing outside space-time, only one of which becomes empirically "real". He suggests defining them with the term "potentia"—with which Aristotle called the ability to be something in the future—, in line with the statement of the German theoretical physicist Werner Heisenberg: "Atoms or elementary particles are not real in themselves; they form a world of potentialities or possibilities, and not so much a world of things or facts or data". In this sense, she Kastner says that the waves of offer and confirmation are sub-empirical and pre-spatio-temporal "possibilities"—that is, they have not yet appeared in space-time—and, therefore, she calls them "incipient transactions".

Kastner calls for a new metaphysical category to describe those "not quite real possibilities", which, far from being mere abstractions, constitute a world of higher dimensions whose structure is described by the mathematics of quantum theory. She raises the need to consider such "possibilities" as part of a reality that encompasses much more than what is contained in space-time. In fact, spatiotemporal events are products that emerge from the transaction processes—timeless and non-local—that take place in the quantum

realm. The metaphor of the "iceberg" used by Freud to describe the human subconscious can be equally applied to the "ontological realm of possibilities" or "quantum earth" that Kastner posits. The "quantumland" refers to the mass of the iceberg that exists below our sight, while the tip, the space-time appearance, is only a small part of all that is the physical universe. Quantum processes, even if they take place outside of space-time, are a fundamental part of that universe.

Kastner's approach to an "ontological realm of possibilities" from which the concrete spatiotemporal world emerges fully coincides with our proposal of a potential relative reality of harmonic sounds that is rhythmically actualized along the successive steps of the evolutionary ladder. In the same way, there is a clear resonance between this idea and the postulate of the physicist David Bohm about a fundamental reality —the "implicate order"—, in which matter and spirit are unified, which unfolds, instant after instant, like the manifested universe —the "explicate order"—.

Starting from the surprising data of quantum physics, Bohm proposes the existence, at a very deep level, of an intrinsic order that, beyond space and time, involves the entire cosmic reality of relationships. This intrinsic order would be projected at each instant into the manifest order, which, in turn, would be injected or introjected again, at each instant, into the intrinsic order. Bohm calls this continuous unfolding and folding between the implicate order and the explicate order "holomovement", which constitutes the basic dynamic phenomenon from which all events of manifested reality in space-time emanate. There is no "thing" in the universe. Everything is "process". What we call things, objects or entities are mere abstractions of what is relatively stable in the processes of movement and transformation. In the implicate order, reality is ordered according to a hierarchy in which each particular level of time has its level of eternity. What is fundamental in the implicate order is the simultaneous presence of a sequence of many degrees of involvement, while, on the contrary, in the explicate order all these degrees are present in an extended and manifest way.

Concepts such as "non-local reality", "entanglement" or "non-separability", so frequent among scholars of the quantum world, point in the same direction. From the mental experiment proposed by Albert Einstein, Boris Podolsky and Nathan Rosen in 1935 —the so-called "EPR paradox"—, from the theorem proposed by John Bell in 1964 —the so-called "Bell inequalities"— and from the real experiment carried out by Alain Aspect in 1982 —and many others in later years— it became evident, beyond the shadow of a doubt, the existence of events that violated the "locality principle" —the assumption that two objects far apart cannot influence each other each other instantly— confirming, thus, the dreaded "spooky action at a distance" that Einstein feared. From then on, quantum mechanics rejects the locality principle due to the so-called "quantum entanglement". Entanglement is a phenomenon in which the quantum states of two or more objects must be described by a single state that involves all objects in the system, even when the objects are spatially separated. A set of entangled particles cannot be defined as if they were separate individual particles, but must be defined as a single wave function for the entire system. Since the entire cosmos was fully united at the time of the Big Bang, it could well be defined by a single wave function in which the entire range of possibilities would already be present in an overlapping manner from its origin. At a quantum level, therefore, a unified vision of universal reality begins to emerge, in which, beyond space and time, all possibilities —potentialities— are present from the very initial moment. The spatio-temporal universe, from this perspective, would be nothing more than the gradual actualizing, instant after instant, of those original potentialities in a broken down manner.

This approach to a unified potential reality, beyond space and time, has not only been developed by researchers in the objective world of energy, but also by researchers in the subjective world of consciousness. Thus, for example, the psychiatrist Carl Jung took up the medieval expression "*unus mundus*" —one world— to suggest the existence of a unified underlying reality from which everything emerges and to which everything returns. He asserted that it was extraordinarily likely that mind and matter

were but two different and complementary aspects of that transcendental *unus mundus*. Jung, together with the physicist Wolfgang Pauli, revealed that the concepts of "archetype" and "synchronicity" reinforced precisely the existence of that underlying unit.

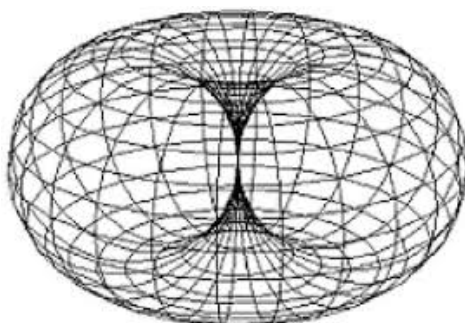
Jung observed that the deeper layers of the psyche lose their individuality —become more collective— and that in this "collective unconscious" there are primordial dynamic patterns, which he called "archetypes." These archetypes are, in themselves, empty elements, virtualities, ideas in the Platonic sense, innate tendencies, models devoid of content from which individual variations are formed. An archetype possesses, in principle, an invariable significant nucleus that determines its mode of manifestation, but the way in which it is expressed in each case does not depend only on it, but also on the material of the phenomenal world with which it counts to make itself visible. The archetypes are not properly psychic elements, nor are they material, but rather psychophysical realities belonging to the field of the "psychoid", prior to an eventual separation into those two domains that we perceive to be divided in our daily reality. The archetypes would form part of that *unus mundus* which, according to scholastic philosophy, potentially contained matter and spirit and, therefore, could be understood as a kingdom of "spiritual matter" or "material spirit".

The existence of this fundamental psychophysical reality can also be demonstrated through the phenomena of "synchronicity", in which coincidences or concordances appear —beyond mere chance— between a psychic event and another physical one without there being a causal relationship between them. These surprising phenomena would be easily explainable if both the observer and the concurrent event proceeded, ultimately, from the same source, from an underlying unity common to both, from the fundamental *unus mundus*. The simultaneous expressions in the domains of the psyche and matter that take place in synchronicities suggest the existence of a single psychophysical whole that we observe through two different pathways. This whole appears as material, if it is observed from the outside, and as psychic, if it is observed from the inside, but in itself it is neither psychic nor material, but entirely transcendent. The hypothesis of a deep potential matrix, beyond any type of division in these two domains that we perceive as separated in everyday reality, thus builds a bridge between the physical world and the mental world. Synchronistic phenomena are understood, then, as double and spontaneous manifestations of that unknown foundation that is the basis of matter and mind, of energy and consciousness.

Resonating with the idea that we have raised to equate our "potential relative reality" with Bohm's "implicate order", with Kastner's "quantumland" or with Jung's "*unus mundus*", the psychologist Marie-Louise von Franz affirmed that it was possible to apply Bohm's terminology to Jung's ideas in such a way that archetypes could be seen as dynamic and unobservable structures of the implicate or infolded order. Or, in the same vein, the psychiatrist Stanislav Grof has proposed that "in an extended version of the holonomic theory, archetypes could be understood as *sui generis* phenomena, as cosmic principles intertwined with the fabric of the implicate order."

Starting from these suggestive parallels, and considering synchronicity phenomena as double and spontaneous manifestations —material and psychic— of a unified underlying reality, one might suspect that archetypes could play a key role in the process of evolution, since it is characterized —as the paleontologist Pierre Teilhard de Chardin stated— by the tendency of matter over time to acquire more complex forms of organization and, simultaneously, by the increase in the level of consciousness in those organisms. Jung himself, glimpsing this possibility, affirmed: "One cannot imagine how much chance and how many risks were necessary during thousands of years to make a man out of a lemur. In the midst of this random chaos, there were probably synchronistic phenomena in action, which, in the face of the known laws of nature and with their help, allowed us to build, in archetypal moments, syntheses that appear to us as extraordinary."

For Jung, synchronistic events appear when some archetypes are deeply involved in a lived situation. These archetypes are then constellated in the psyche, while very strong affective and emotional dynamics are unleashed. This circumstance can be observed, above all, in very serious crisis situations, and is well known by psychotherapists. In the words of the biologist Hansueli Etter: "If we transpose these observations analogically to the level of phylogeny, we can say that archetypal situations are effectively constellated when a collective and biological crisis imminently threatens a given species or several species. At those particular moments, synchronistic events must be very numerous (that is, mutations or gene redistributions must take place within populations), so that they offer the species the possibility of superior development. It seems to me that in those events considered until now as fortuitous, we must see synchronistic phenomena."



### C) Spatio-temporal relative reality

In a previous addendum we have outlined the basic characteristics of toroidal dynamics through which the potential reality of the unmanifested foundation is actualized and unfolds in the world of forms. This process is very similar to the "holomovement" proposed by Bohm between the "implicate order" and the "explicate order". The departure and return, instant after instant, from and towards the non-dual foundation, through its finite and fleeting manifestation in space-time, allows to actualize, one after another, the successive potential levels of stability of the spectrum of energy-consciousness—that is, the entire hierarchy of "harmonics" generated at the same original moment—, starting with the most basic ones—prioritarily energy— and ending with the highest ones—prioritarily consciousness—. At each turn, the particular potential of a certain level of the spectrum is projected at a specific point-instant of pixelated space-time, it integrates with the aspects that have already emerged in previous heights, and immediately, that specific information is introjected into the field of collective memory that is generated in the foundation. When this entity has deployed the full potential of the stratum in which it basically operates and has integrated it with everything that has emerged in the preceding stages, having reached a specific level of complexity, it can resonate with the next "harmonic" of the spectrum of energy-consciousness, and thus ascend to a new rung of the long ladder of evolution. And so on.

This intrinsically creative recursive dynamic between the "potential reality" and the "actualized reality" is mediated by that unified field of memory that, step by step, is gestating at fundamental level. All the information collected at any point-instant of the manifested world is immediately introjected into the basic field of collective memory, which, in this way, increases, moment by moment, its potential. According to our approach, with the original polarization of the fundamental non-dual Emptiness, as an objective pole—basically of energy— and a subjective pole—basically of consciousness—, a vast spectrum of balances of energy-consciousness is automatically generated between both polar facets, which runs the gamut from the most basic states—of enormous energy and little consciousness—to the highest—of little energy and enormous consciousness. "Before" the emergence of the manifested universe, this potential spectrum had

a basically archetypal character—in our research we have talked about the chromatic range, the pythagorean circle (spiral) of fifths, the series of chakras...—, but from the moment the original Big Bang singularity occurs, the toroidal dance between potential reality and manifested reality begins—between the implicate order and the explicate order—, in which the game of projections and introjections that we have just discussed. It is precisely this toroidal game that, instant after instant, converts the original archetypal levels of the spectrum of energy-consciousness into fields of collective memory that are more and more solidified with each turn of the dance. This is the reason why, at present, the behavior of the most basic levels of the spectrum of energy-consciousness in the manifested universe—the material levels—is very predictable, and why, consequently, we can describe the physical laws of nature quite accurately. On the contrary, the highest levels of the potential spectrum have not yet been barely actualized in space-time and, therefore, today they still maintain their character of archetypal lightness and are difficult to describe.

Before continuing with our exposition, we would like to refer at this point to the work of other researchers who also propose the existence of a field of collective memory at the foundation of reality, with great similarities to the one we are proposing here.

For example, systems philosopher Ervin Laszlo postulates the idea of an information field as the substance of the cosmos. Using the Sanskrit term *Akasha*—with which the Hindu tradition designated the foundation that underlies all things and becomes all things—Laszlo calls this field of information the "akashic field". The *Akasha*—he affirms—is a dimension in the universe that not only underlies all the things that exist in it, but also generates and interconnects them, conserving the information they have generated. It is the matrix of reality, the network of the world, the memory of the cosmos. Akashic cosmology conceives of the universe as an integral system that evolves in the interaction of two dimensions: a hidden or akashic dimension and an observable or manifest dimension. According to this model, the hidden dimension "in-forms" the manifest dimension, and this, in turn, "de-forms" the hidden dimension, modifying its information potential. This two-way interaction between the two dimensions constitutes a continuous loop of action and reaction, creating progressive coherence in the manifest dimension, and accumulating increasing information potential in the hidden dimension, all of which, according to Laszlo, may explain why our universe, against all odds, is well configured to form galaxies and sentient life forms, and why evolution is an informed, not a random, process.

For his part, the biochemist Rupert Sheldrake proposes a dynamic similar to Bohm's holomovement in which implicated and non-local morphogenetic fields channel the collective memory of forms and behaviors to subsequent generations. Sheldrake places special emphasis on the idea that the explained order, in a way, enriches the implicate—time enriches eternity—, because the finite contributes to the global order by re-injecting its contributions back into the whole. Each moment is a projection of the whole, but that moment is introjected back into the whole. The next moment implies, in part, a re-projection of that introjection, and so on. In this way, as each instant contains a projection of the re-injection of the previous instants—which constitutes a certain form of memory—it resembles its predecessors, but it is also different from them. According to this concept of projection and introjection, all of the entities in the universe are contributing to the deepest intrinsic nature, because we participate in the introjection of the manifest order into the implicate order, thus creating a higher order that, instant after instant, shapes evolutionary dynamics.

Similarly, the theoretical physicist Nassim Hamein posits a fundamental domain of information from which everything arises and to which everything returns. Non-local intercommunication, beyond any frame of space and time, is possible thanks to the unified spatial memory network formed by microwormholes of the basic holographic information field on the Planck scale. Memory and the recursive processes of feedback and feedforward information from the quantum vacuum—or holofield—enable learning and evolutionary behavior. The flow of dynamic information to and from that field can be the generative source of organized

matter, of self-organizing biological systems, and ultimately of self-aware entities. Hameiri asserts, in summary, that we live in a highly intertwined and interconnected universe where a fundamental field of information, shared across all scales, drives evolutionary mechanisms in which the environment influences the individual and the individual influences the environment, into a non-local interconnected whole: a universe that is ultimately One.

Returning to the exposition of our proposal, we are going to try to describe, below, the mechanism through which the potential reality is actualized in and as the manifested reality, which will give us the essential clues to outline the nature of this manifestation. As we have explained, with the original dualization of non-dual Emptiness in the form of an objective pole (basically of energy) and a subjective pole (basically of consciousness), an integral, simultaneous and entangled spectrum of energy-consciousness automatically appears between the two extremes in different balances, which constitutes the **potential relative reality** or basic archetype that, later, will manifest as **actualized relative reality** or evolutionary universe. The tension generated between both extremes after the original polarization creates an expansive and entropic current coming from the pole of energy and a contractive and syntropic current coming from the pole of consciousness, which travel, in opposite directions, the entire spectrum of potential levels of stability, standing waves or musical harmonics that we have talked about. The initial instant of the universal manifestation —Big Bang— took place when the ascending and descending flows resonated with each other at the most basic level of the energy-consciousness spectrum and, with this “handshake” between them, the “collapse of the wave function” of the first potential archetype —or musical harmonic— was produced in the world of forms. Since then, the toroidal game of projections and introjections, instant after instant, has gradually unfolded in the explicate order the successive potential levels of stratified stability of the implicate order in which the ascending and descending flows have been resonating. This iterative dynamic, as we have seen, has been converting the original archetypal levels of the energy-consciousness spectrum into morphogenetic fields of collective memory that are more and more solidified with each turn of the dance, beginning with the most basic rungs of the evolutionary ladder. The highest rungs still maintain their primeval archetypal lightness.

It is important to remark, here, that the fertile interaction between the primary poles of energy and consciousness, through the ascending —entropic— and descending —syntropic— flows, does not take place in the manifest world, but in the underlying potential reality, more beyond space and time. It's an instant interaction. Not temporary. Sometimes, when describing this bidirectional dynamic, one speaks incorrectly of a flow that advances in time and a flow that goes back in time, but it would be more accurate to think, rather, of a transaction between different depths of a single **eternal Now**, which encompasses in itself the totality of “time”. When this transaction “collapses” in a **fleeting now**, the memory of past moments and the expectation of future moments makes us conceive the image of a time line. But it's just an image. The manifested universe arises and disappears, instant after instant, from and to the underlying, entangled and unified potential reality, which is always Now. Given that the toroidal game of projections and introjections between the potential and manifested realms of reality unfolds, gradually, more and more complex forms each time —due to the fact that they integrate a greater number of levels of the stratified field of collective memory that is developing—, we can glimpse in the universal process a clear “arrow of time” that is oriented, precisely, towards the creation of progressively complex organisms and with increasing levels of consciousness. But that does not mean that there really is a real time line, only that this is our imaginary way of ordering the partial data —the frames of the world film— that we successively capture. Well, as the physicist Erwin Schrödinger affirmed: “the fact that something propagates in space or that something happens in a well-defined time of 'before and after' is not a quality of the world that we perceive, but belongs to the perceiving mind that (somehow in his current situation) he finds himself unable to register anything that is offered to him if it is not according to this spatio-temporal scheme.”

It seems that the world that we are beginning to glimpse lacks the solidity that we naively assumed, and that, in reality, it is more like a surprising and gigantic evolutionary hologram. Let's see. A hologram is a type of three-dimensional representation that is produced when a *laser ray splits into two distinct rays*. One of them is bounced off the object to be photographed, and then the second ray, coming directly from the source, is allowed to collide with the reflected light from the first, producing an interference pattern that is recorded on a plate. When a light passes through this plate, a three-dimensional image of the original object automatically emerges that lacks the slightest substance. It is pure appearance. Another surprising fact is that, unlike what happens with normal photographs, *each part of a holographic plate contains the complete information of the whole*. Thus, if a holographic plate is broken into pieces, each piece, no matter how small, can be used to reconstruct the complete image of the photographed object, with greater or lesser definition. Each part contains the whole!

According to our approach, the gestation process of the universal manifestation begins with the original bifurcation of the non-dual Lucid-Light —“a laser ray is divided into two different rays”— into an objective pole (basically of energy) and a pole subjective (basically of consciousness), with the consequent interaction between the ascending and descending flows that are generated between them. Let us remember that, due to the toroidal dynamics of projections and introjections, the most basic levels have developed very solid morphogenetic memory fields, while the highest levels still maintain their original archetypal lightness. For this reason, the upward flow crosses very defined morphogenetic fields —“one of them is bounced against the object to be photographed”—, while the downward flow comes directly from the subjective pole —“the second ray comes directly from the font”—. When both flows resonate and interact with each other, the transaction is sealed with a handshake or standing wave —“the second ray (...) is allowed to collide with the reflected light of the first, producing an interference pattern that is recorded on a plate”—, and the potential collective memory collapses into a specific, punctual and fleeting formal image —“a three-dimensional image of the original object automatically arises that lacks the slightest substantiality”.

Our research has revealed the complete parallelism between the phylogenetic and ontogenetic processes of the human being. Both global evolution and individual development take place in the same time frame, with an identical pattern of unfolding and folding between the original and final poles, and going through exactly the same stages or levels of stability. Each individual life recapitulates, then, the entire global trajectory traveled by their ancestors —“each part of a holographic plate contains the complete information of the totality”—. Everything seems to suggest that the universal manifestation has holographic characteristics and that the “whole” and the “parts” are mere reflections of a common underlying foundation. Bearing in mind that a characteristic of holograms is that the smaller the size of the piece of plate used, the blurrier the reconstructed image is —definition is lost, but the integrity of the image is maintained—, we could well propose that the more complex is a given organism —the more levels of manifestation it has integrated— the greater the degree of clarity and definition of the total original image. If this approach is valid, an atom, a molecule, a cell, a mammal, a primate, or a human being, each one of them possesses, in its innermost depths, free access to the totality of the unified field of collective memory of the cosmos, although, depending on their specific characteristics —depending on their respective capacities to capture and express that plenitude that underlies and surrounds them—, it only connects with certain facets of that field.

According to everything exposed up to here, the exclusive protagonist of the creative dance of the universe is the simple non-dual Self-Evidence always present, the ultimate identity of everything and everyone, the only unquestionable reality of existence. This pure Certainty-of-Being, obvious but invisible, needs to unfold polarly as subject and object in order to be able to see itself, partially, in infinite ways. As we have explained, the fertile interaction between the bidirectional flows that are generated between both poles is reflected —collapses— in an endless number of subject-objective, finite and fleeting holographic images,

with which Self-Evidence identifies, instant after instant, being able, in this way, to contemplate with progressive clarity in the world of forms his own original invisible face.

The non-dual absolute Reality —Self-Evidence— is timeless. Potential relative reality —the implicate order, the archetypal *unus mundus*—, that is, the entirety of the polar, entangled and unitary spectrum of energy-consciousness occurs in an eternal Now, encompassing the entirety of “time.” The manifested relative reality, the space-time holographic image, is born and dies every moment. The entirety of the world of appearances is being created now... and now... and now... In summary, the timeless Self-Evidence is projected through the integral Here-Now of the potential archetype, identifies with each and every one of the point-instant of pixelated space-time, it contemplates itself from a certain perspective, and immediately returns to its original plenitude... from which, in truth, it had never left.

There are no independent objects. There are no separate subjects. Everything in the manifest world is subject-objective. Ultimately, everything is an expression of the basic interaction between the original poles of energy and consciousness in which the ever-present fundamental Self-Evidence bifurcates. The universe has no particular shape. Everything is relational. The presumed objective perceived world is just an image generated by identification with a particular subjective form. There are colors because there are eyes. There are sounds because there are ears. Everything that you are perceiving, dear reader, in yourself and in your environment at this moment, is just a spontaneous and fleeting image that arises from the interaction between the Subject pole —in “you”— and the Object pole —in “everything your environment”—, in which the Self-Evidence that you truly are branches off, from instant to instant, to contemplate Itself in infinite ways. Everything is happening by itself. Eternally. You can relax. Enjoy the dance!

Before finishing this addendum, we would like to underline that this non-dual worldview that we are proposing —which, needless to say, clashes head-on with the materialist paradigm still in force— is capable of resolving, simply and without artifice, some of the essential enigmas to which conventional science has not been able to give a convincing answer. Let's briefly review some of them.

—**The hard problem of consciousness.** The cognitive philosopher David Chalmers introduced the concept of the “hard problem” of consciousness to refer to the great difficulty of explaining, from materialistic parameters, how it is possible that an —objective— physical brain, which only processes electrical or chemical signals, can give rise to *qualia* or conscious subjective experiences. From the non-dual perspective from which we are developing our research, on the contrary, the “hard problem” does not even arise, since, far from assuming that the objective world produces subjective experiences —as materialist monism does— or that subjective experiences give rise to the objective world —as idealistic monism does—, we defend that both energy and consciousness are nothing more than the polar expression of the same and unique underlying reality in which both facets are eternally undifferentiated.

—**The mind-body problem.** Closely related to the hard problem of consciousness, the mind-body problem refers to the difficulty of explaining the interaction between “inner” mental states and “outer” bodily states. How can the mind act on the brain, as evidenced, for example, in the so-called “placebo effect”? From the scheme that we are proposing, there is no such problem, since, ultimately, the “external” world and the “internal” world —energy and consciousness— are non-dual. All levels of the spectrum of manifested reality are nothing more than different balances between these two polar facets of a single fundamental reality, and therefore any interaction between them is nothing more than mere movements between different densities of the same substance.

—**The problem of downward causality.** Materialist reductionism has sought to explain complex organisms from their simplest component elements —that is, through “ascending causation”— and, for this reason, “descending causation” —exercised by the emergent properties of wholes on the properties of their

lower-level constituents—, that researchers of complex systems have revealed in numerous realms of reality, has been accused of conceptual and metaphysical incoherence. According to our approach, far from there being incompatibility between both types of causality, all manifested reality arises precisely from the interaction and resonance between ascending entropic flows and descending syntropic flows, thereby simultaneously transcending the partial perspectives of reductionism and holism, integrating them into an all-encompassing non-dual vision.

—**The problem of fine-tuned universe.** This problem, like that of the anthropic principle, has arisen when it has been verified that the universe seems to have been meticulously adjusted to allow the existence of life and mind, since, if any of the basic physical constants had been slightly different, the appearance of life as we know it would not have been possible. According to the materialist perspective, therefore, we inhabit an extremely improbable universe. From our perspective, on the contrary, since all events in the universe arise from the interaction and consensus between the flows coming from the original pole of energy —from the “past”— and from the final pole of consciousness —from the “future”—, it is completely natural that, without having to resort to any external designer, already the first events of the universal process were fully coordinated and adjusted to future events. How could it be otherwise!

—**The problem of parapsychological experiences.** Parapsychology studies different paranormal psychic phenomena that do not seem to have a scientific explanation, nor do they fit within the framework of currently accepted physical laws, such as telepathy, precognition, clairvoyance, extrasensory perception, out-of-body experiences, near-death experiences or synchronicity phenomena. All this, obviously, as it is difficult to fit within the narrow framework of the current materialist paradigm, is rejected outright by a large part of the scientific community, which considers parapsychology as a mere pseudoscience. On the contrary, since the framework of our proposal is much broader, it is very likely that some of these phenomena can be easily located within it. Specifically, in the field of what we have called “potential relative reality” —Kastner's quantumland, Bohm's implicate order, Jung's archetypal world, Sheldrake's morphogenetic fields, Laszlo's akashic field or Hameiri's unified spatial memory network— perhaps easy explanations can be found for many of the parapsychological experiences discussed.

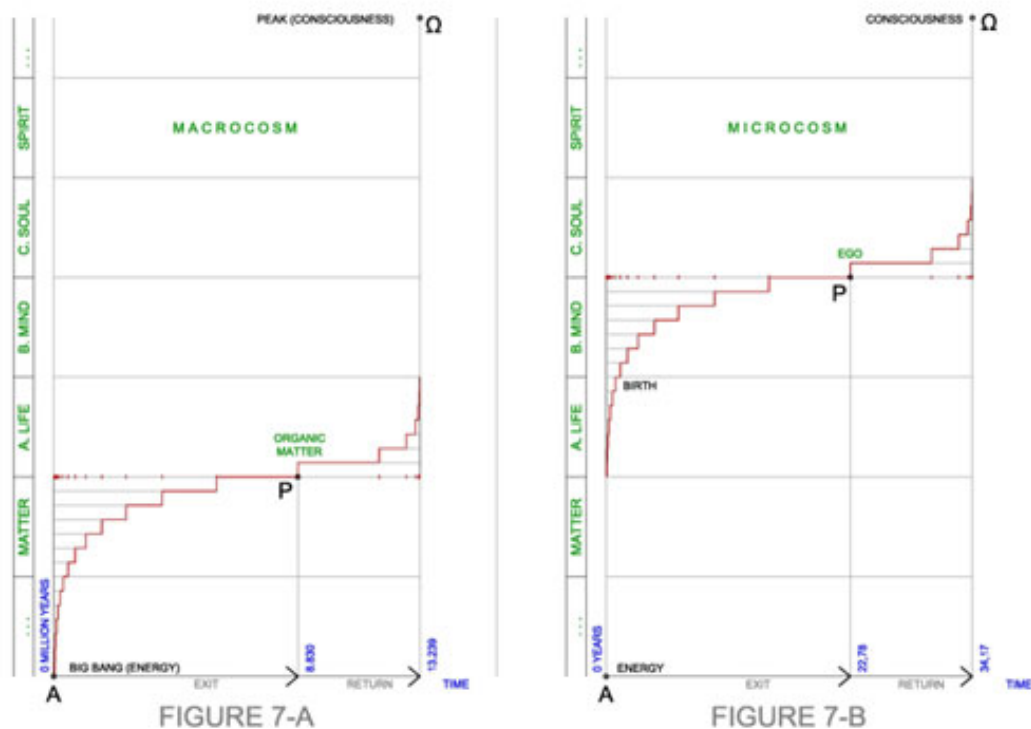
—**The root problem of science without consciousness.** Materialistic science has usually flatly rejected the claims of spiritual traditions in the name of reason. Perhaps, in principle, this attitude made a lot of sense, within the pretense of finding natural explanations for the phenomena of the world, without resorting to magical divine interventions. But, in fact, this rejection led to the unfortunate and impoverishing marginalization of an immense field of deep and rigorous investigations into the inner world, developed over many centuries in many different cultures. It is surprising to verify the enormous coherence of these experiential investigations, as has been revealed in the so-called “perennial philosophy”. We would like to highlight here, in a very special way, the non-dual schools that are present in all the great wisdom traditions: in philosophical Taoism, in Hinduism —Advaita Vedānta, Kashmiri Shaivism—, in Mahāyāna Buddhism —chan, zen—, in vajrayāna Buddhism —mahāmudrā, dzogchen—, in Judaism —kabbalah—, in Christianity —Rhenish and Castilian mysticism—, in Islam —sufism—... In all these schools we can find abundant and luminous references about of the fundamental realm that we have called “absolute non-dual reality”. It seems that the time has come to break the narrow limits of the materialist paradigm and begin to propose larger worldviews, capable of integrating, without prejudice, all the facets —interior and exterior, individual and collective— in which the unfathomable Emptiness unfolds. Perhaps, in the end, we will discover that reality—our true reality—is much more fascinating than we could ever have imagined.

(Note: The English version of this Addendum 8 is made using Google translate)

## Addendum 9: Holographic evolution

In this addendum we are going to present an intriguing coincidence that has arisen unexpectedly in the course of the present research about the pattern of evolution. From the outset, this enigmatic coincidence raised the question of whether it was simply a mere chance or whether, on the contrary, the matter had truly profound and revolutionary implications. The question has been hanging around for quite a few years until, recently, surprising investigations carried out in theoretical physics on the holographic principle have opened up the possibility of a fascinating solution to that intriguing synchrony that appeared fortuitously in our work.

To focus the issue a bit, we are going to briefly recall a central point of the previously developed research. If the reader has taken a look at the original text of the article *Beyond Darwin: The hidden rhythm of evolution*, they will have been able to see how a very precise harmonic-spiral-fractal pattern is revealed in the deployment process of the successive evolutionary levels of the integral spectrum of energy-consciousness that punctuates both human phylogeny and ontogeny. All trajectories start at a breakneck rhythm at their origin (A), slow down progressively as they move toward a certain level of the spectrum, and then speed up again until they reach breakneck speeds again when they start approaching the final moment ( $\Omega$ ). In Figures 7-A and 7-B we have schematized this idea:

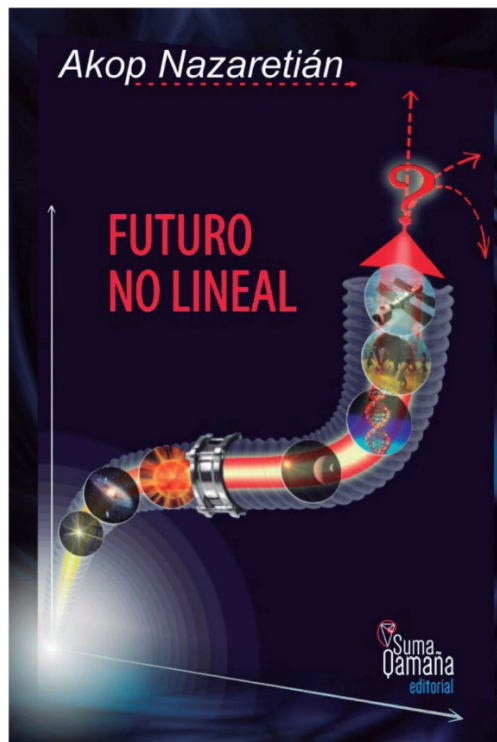


Recently, two Big History scholars, Leonid Grinin and Andrey Korotayev, have edited a book entitled *Evolution: Trajectories of Social Evolution*, which has been published in Russia by “Uchitel”. In one of its chapters, entitled *Non-Dual Singularity*, we have been able to outline the core of our research and its ultimate implications: [https://www.sociostudies.org/upload/sociostudies.org/book/evol\\_8\\_en/08\\_Faixat.pdf](https://www.sociostudies.org/upload/sociostudies.org/book/evol_8_en/08_Faixat.pdf) . Next, we reproduce the *Abstract* that heads this chapter:

*“The Universe emerged in a violent Singularity —basically of energy— generating vertiginous transformations. Later, due to cooling, the emergence of novelties slowed down gradually. After the formation of the solar system and the subsequent emergence of life on our planet, the rhythm of creative transformations began to increase progressively, first through biological evolution and, later, through human development and expansion of civilizations. Currently, the emergence of novelties is again dizzying and everything seems to indicate that we are fast approaching another imminent Singularity —basically of consciousness— of infinite creativity.*

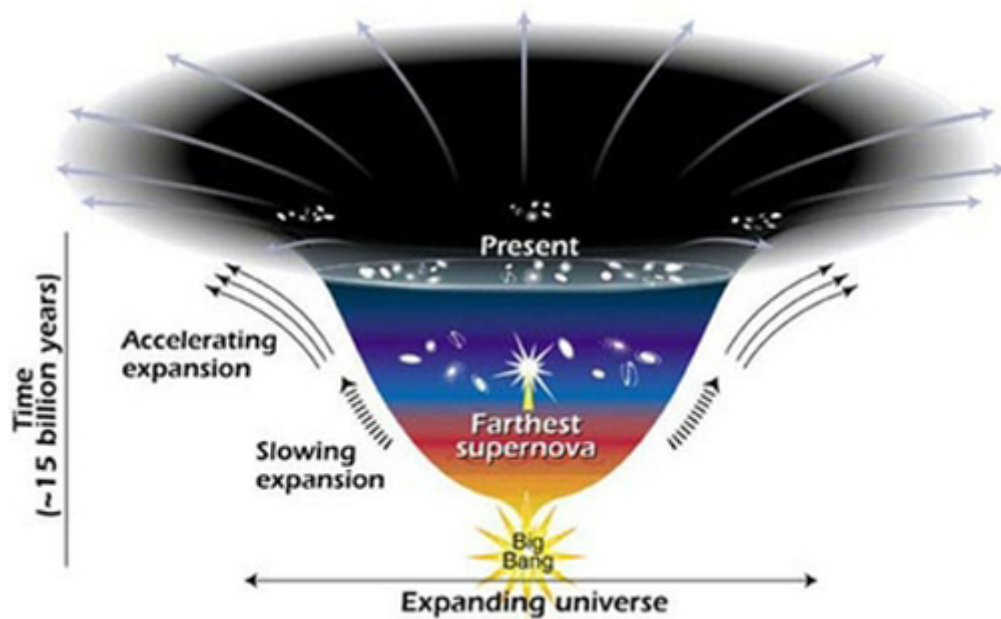
*In this paper we propose that both Singularities — $A$  and  $\Omega$ — are nothing but the polar expression of the fundamental Void always present, 'prior' to its apparent dualization as energy and consciousness. The initial and final Singularities would not be, in this way, but the points of exit from and entry to this eternally self-evident non-dual Emptiness that, instant after instant, manifests itself in and as the world of forms."*

This same evolutionary deceleration-acceleration scheme is clearly reflected on the cover of a book entitled *Futuro No Lineal* —*Nonlinear Future*— written precisely by another Russian researcher of Big History, Akop Nazaretyan, published in Spanish by the Argentine publisher "Suma Qamaña":



1

Without apparent relation to all this, the American astrophysicists Saul Perlmutter, Brian P. Schmidt and Adam G. Riess received the Nobel Prize in Physics in 2011 for providing evidence in favor of the acceleration in the expansion of the universe through observations of distant supernovae. This discovery was completely unexpected, since until then it was thought that, although the universe was certainly expanding since its origin, the rhythm had been decreasing due to the mutual gravitational attraction between distant galaxies, albeit slowly due to the low density of matter-energy present in the universe. Evidence from Perlmutter, Schmidt, and Riess conclusively demonstrated that about 4.5 billion years ago —about 9 billion years after the Big Bang— the slowing rhythm of expansion reversed, and from then the universe began to expand at an ever-increasing speed, starting an era dominated by an alleged and mysterious "dark energy" that causes the "accelerated expansion of the universe". In the framework of general relativity, an accelerating expansion can be explained by a positive value of the cosmological constant, usually denoted by the capital Greek letter lambda ( $\Lambda$ ). While possible alternative explanations exist, the description assuming dark energy (positive  $\Lambda$ ) is used in the current standard model of cosmology, which also includes cold dark matter (CDM) and is known as the  $\Lambda$ -CDM model. In relation to the subject we are dealing with, we would like to point out here that, precisely, in the Wikipedia article on the "cosmological constant", the text that appears at the bottom of the initial graph is, literally, the following: "*Sketch of the timeline of the Universe in the  $\Lambda$ CDM model. The accelerated expansion in the **last third of the timeline** represents the dark-energy dominated era.*" (The bolds are mine.) Next, we include an image, also taken from Wikipedia, which clearly expresses the slowdown and acceleration phases in the expansion of the universe:



It is enough to observe the shape and chronology of the global trajectory resulting from the recently discovered expansion of the universe, to realize its complete parallelism with the shape and chronology of the global trajectory of the evolutionary process of the "macrocosm" revealed in our research. The inflection point between the deceleration and acceleration phases in the expansion process of the universe —at the beginning of ***"the last third of the timeline"***— exactly coincides with the inflection point between the deceleration and acceleration phases of the process of emergence of the successive evolutionary levels that we have analyzed in this paper, since, as we can remember, it takes place in the second node of the standing wave corresponding to the second harmonic, that is, precisely at the beginning of the *third third of the global trajectory*.

Was all this a mere coincidence or did the matter have a deeper meaning?... At first glance, it did not appear that the expansion of the universe had anything to do with the evolutionary process of matter, life, mind and spirit, through which progressively complex and conscious organisms develop, but...

Recently, reading the beautiful book *Cosmometry* by the American researcher Marshall Lefferts —from Nassim Hamein's team— I found the following text on page 120: *"Both Hamein and the cosmologist Jude Currivan propose that there is an informational aspect of universal expansion, wherein the total information content of the universe is constantly increasing, thus requiring a growing volume of pixelated spacetime within which to accommodate this informational evolution."* And, at the bottom of that same page, I was also able to read: *"In a personal conversation with me, Currivan elaborated that in every Planck-scale moment the universe adds another set of information that is encoded into the expanding field of spacetime, and that the expansion of space and flow of time is evolution, without which there would be no evolutionary experience of consciousness."* Eureka! At that moment I had the feeling that, finally!, the long-awaited explanation of the "mysterious" parallelism found between the accelerated expansion of the universe and the accelerated deployment of the evolution of consciousness, began to be within reach.

This new understanding of the universe that has begun to be considered in recent decades revolves around what is known as the "holographic principle", in which some of the most eminent theoretical physicists of our time are involved, such as Leonard Susskind, Gerard 't Hooft, Jacob Bekenstein, Tom Banks, Ted Jacobson, Juan Martín Maldacena or Raphael Bousso. There is now a broad consensus among physicists working on string theory and loop quantum gravity that the most fundamental scientific concept we have in physics is the holographic principle. In fact, this principle is probably the best guide we have at this time to achieve the long-sought unification of relativity theory with quantum theory.

The history of this approach dates back to the early 1970s, when Wheeler and Bekenstein tried to understand what happens to an object's encoded information when that object falls into a black hole. In the mid-1990s, 't Hooft and Susskind relaunched this research by framing black hole event horizons in terms of Planck area-sized pixels, each of which encodes a single quantized bit of information. They called this idea the holographic principle. Its basic postulate could be summarized by saying that all the information contained in a certain volume of a concrete space can be known from the codifiable information on the border of said region. In its broadest sense, the theory suggests that all the information that makes up our space-time universe would be contained in a two-dimensional surface located on the observer-dependent cosmological horizon, in such a way that the three-dimensional world we believe inhabit would ultimately be basically illusory, like a holographic image projected from the far reaches of space.

American science writer Amanda Geffer —author of the award-winning book *Trespassing on Einstein's Lawn*— has laid out with great clarity the startling logical implications of the holographic principle in the context of the discovery of dark energy and the accelerating expansion of the universe. She claims that if we want to move towards a true theory of quantum gravity —capable of unifying the general theory of relativity with quantum mechanics— perhaps we should abandon the notion that we all share the same universe and instead posit that each observer has his own universe, a complete and singular reality. Next, we are going to summarize some basic ideas that Geffer develops in her article *Cosmic Solipsism*.

According to the theory of relativity, no information can escape from a black hole, however, according to quantum theory, it inevitably has to. How to explain this inconsistency? In a flat space-time of a world without gravity all observers would agree on the definition of the objects contemplated, but when an event horizon is introduced, the (accelerated) observers outside that horizon and the (inertial) observers that who fall through it will perceive incommensurable realities among themselves. The accelerated observer will see the information radiating from the event horizon, while the inertial observer will see the information falling into it. That is, according to the accelerated observer the horizon produces particles, and according to the inertial observer, the horizon does not even exist and does not perceive any radiation in the process. Faced with this tangled crossroads, the holographic principle found a way to solve it by stating that no observer can see the inside and outside of a black hole at the same time, so that when it comes to horizons, we can talk about the world of the accelerated observer or the world of the inertial observer, but never of both simultaneously. We must, therefore, restrict ourselves to a single local point of view, because, in case of not doing so, we would be violating the laws of physics. This radical limitation in our description of reality has been called “horizon complementarity”.

If horizon complementarity applied only to black holes it could be considered a simple curiosity, but the fact is that its field of application is actually much broader. Einstein's equivalence principle put gravity and acceleration on an equal footing: the effects of the force of gravity are completely identical to the effects of accelerated motion. Thus, if gravity can form an event horizon —as it does in black holes— acceleration can under any other circumstances as well. So, when it is space-time itself that is expanding rapidly driven by the negative pressure of dark energy —as we have seen at the beginning of this addendum—, any observer within that space-time will find themselves surrounded by an event horizon. Given, then, that the location of the horizon is always relative to the location of the observer, everything seems to indicate that quantum gravity, ultimately, does not allow a unique, objective and complete description of the universe and, therefore, it will be necessary to formulate its laws with reference to a specific observer, not more than one at a time. If we respect the complementarity of the horizon in an rapidly expanding space-time, we will have to replace an incoherent global description of reality with a local description accessible to a single observer. The existence of dark energy makes each frame of reference a universe unto itself, the end and all of reality. In other words, we may have to accept the notion that there is *my* universe and *your* universe, but there is no such thing as *the* universe.

In this same line of thought, the American theoretical physicist and neurologist James P. Kowall has delved into the holographic principle to its ultimate implications —without letting himself be carried away by the

materialistic prejudices that grip many researchers—, finally reaching a revolutionary understanding of the reality that, unexpectedly, is completely in tune with the central message of all the great non-dual wisdom traditions. Next, we are going to summarize some of the ideas that Kowall exposes in the numerous and clarifying articles of his. [The reader interested in knowing the more technical details of his approach can consult the *Science and Nonduality* page: <https://scienceandnonduality.wordpress.com/>].

The holographic principle is a radical idea that things do not actually exist in three-dimensional space, but that the appearance of things in any region of space is a holographic projection from that region's two-dimensional bounding surface to the point of view of a central off-screen observer. The observer's horizon thus acts as a holographic screen that encodes the entangled qubits —quantum bits— of information about all the things the observer can see in that bounded region of space. The expression of dark energy allows the universe to expand and cool as entropy increases, the cosmological constant changes to a lower value, and the observer's cosmic horizon increases in radius. This is how more information qubits are encoded for the universe as the observer's cosmic horizon increases its surface area.

The bounding surface of space arises naturally as an event horizon every time the observer enters an accelerating frame of reference, like a cosmic horizon that arises every time dark energy is spent and space appears to be expanding at an accelerating rate from the point of view of the observer located at the center of the singularity. The nature of observation is thus reduced to three components: *the bounding surface of space*, which arises in the observer's frame of reference and acts as a holographic screen, *the observer's consciousness* at the central point of view of that limited region of space, and *the holographic projection* of the images of all things that the observer can contemplate. These things, therefore, do not really exist in three-dimensional space, but arise from the configuration states of the information encoded on the observer's holographic screen and are therefore nothing more than mere virtual images projected from that screen. The observer, ultimately, is only the perceptive consciousness present at the central point of view, that is, a single point of consciousness.

The whole process of observing can only start when *the energy* is spent and *the observer* enters an accelerated frame of reference. If this does not happen, there is no observation of anything. There can be no creation without perception. Creation and perception are simultaneous events. The state in which no energy is expended is the state of a freely falling observer, in which there is no acceleration and no boundary surface of space, and therefore in which nothing is observed. In fact, modern cosmology reveals that the total energy of the observable universe is exactly zero. This is possible because the negative potential energy of gravitational attraction can cancel all forms of positive energy such as dark energy, mass energy, or kinetic energy. Ultimately, therefore, nothing really exists. The apparent existence of everything is simply an illusory manifestation of nothingness. The space-time totality is, finally, this holographic disguise of nothingness appearing as something.

There are three big questions: where does the observer's *consciousness* come from?, where does the *energy* inherent in the observer's accelerated frame of reference come from?, and where does the *information* encoded on the observer's holographic screen come from? The perceiving *consciousness* of the observer, viewing his own holographic world from that world's central vantage point, and the expression of dark *energy*, placing the observer in an accelerated frame of reference that creates that holographic world, arise together, simultaneously, from the true vacuum state. The emptiness of nothingness or the true state of emptiness that gives rise to the creation of the *physical universe*, is also the primordial nature of the *perceiving consciousness* of the observer who contemplates his world. Emptiness is not only the potentiality *to create* all things, but also the potentiality *to perceive* all things. The observer's consciousness cannot arise in a brain within a body, since a body is simply another perceptible thing in that world, no more real than a holographic image projected from a screen to the observer's central point of view. The source of the observer's *perceiving consciousness* must be the same void of nothingness that gives rise to the creation of the observer's *perceptible world*. This void of nothingness is limitless and, for lack of a better

description, we could call it limitless consciousness. Somehow, this nothingness is also infinite unity, undifferentiated and formless. Emptiness is the primordial or ultimate nature of existence.

Correctly interpreted, the holographic principle tells us that the physical world is only an expression of the potentiality of the void. Through its geometric mechanisms, the void has the potential *to create* a world for itself and *to observe* that world from its central vantage point. The observer and the holographic world of him always arise together in a subject-object relationship of perception. There is no objective physical world out there, but everything emerges in a subject-object relationship that occurs when the observer enters an accelerated frame of reference and their event horizon emerges, acting as a holographic screen when encoding qubits of information. Whatever the observer beholds is both an objective reality and a subjective reality. There is no way to remove the subjective observer from the observation. Everything that can be perceived in the world, which quantum theory refers to as an observation or measurement of the world, occurs in a subject-object relationship. By its very nature, the quantum state of *potentiality* is an unobserved state until it is observed, at which point it is reduced to an observed state of *actuality*. It just doesn't make sense to talk about the quantum state as an objective physical reality. The quantum state is just a state of potentiality. It describes what can probably be observed, not what is actually observed. When the observer focuses their attention on their own holographic world, the observer's consciousness becomes focused on one point of view and the observer's holographic world appears to come into being. The observer's holographic world can only appear to come into existence when the observer focuses their attention on that world. The observer must be present as a presence of consciousness at the center of his own world for that world to appear to exist.

Unifying quantum theory with relativity theory is the problem of making sense of the observer in both theories. Relativity speaks of the observer observing or measuring the relativistic properties of their objects in an accelerated frame of reference, whereas quantum theory speaks of the observer observing or measuring the quantized properties of their objects as those properties arise from a quantum state of potentiality. The key point is that these observations always occur in the subject-object perception relationship. Neither quantum theory nor relativity theory really has anything significant to say about the nature of the observer, other than that the observer sees some property of an object in a subject-object relationship. The problem that physicists seem unwilling to face is that everything perceptible arises in a subject-object relationship when the subject perceives some observable property in an object. The only logical conclusion that can be drawn from all this is that not only the *perceptible object* arises from the void state as an excitation of energy and information, but the *perceiving subject* also arises from the void state. This tells us fundamentally that the vacuum state is not only the source of all the energy and information inherent in objects, but also the source of the consciousness that perceives the properties of all those objects. The triad of energy, information and perception of consciousness have to arise together in a subject-object relationship of perception, and they do so simultaneously from the state of emptiness.

The origin of universal manifestation occurs when the void is projected as the perceiving consciousness of all observers present at the central point of view of their own holographic worlds. The only reason different observers view different worlds is because each observer is located in its own coordinate system that moves relative to other coordinate systems. In any case, the perceiving consciousness in each and every one of the determined points of view is the same and unique consciousness, only that, being located in different points of view, it contemplates different universes. Each observer has his own bubble and is at the center of his own world. The various observers do not exist within the same world, but each have their own world defined on their own viewing screen. How, then, can one explain a consensual reality shared by many observers, each present at the central point of view of their own holographic world? The answer lies in the fact that when their holographic screens overlap, they can share information. Information encoded on one display screen is correlated with information encoded on another screen due to quantum entanglement. Each display screen defines an information state that includes all the possible ways that information can be encoded in all the different pixels. What seems to happen in any one bubble is connected to what seems to happen in the other bubbles as bits of information in those different states of

information interact with each other, align, and share their content. Holography demonstrates that consensus reality is made up of multiple interlocking worlds, each defined on its own viewing screen and each viewed from its own point of view. Consensus reality is not a single objective reality, but many intertwined worlds that share information with each other. The quantum state of potentiality of the universe is a sum of all the bubbles in the vacuum.

Every time an observer makes an observation of something in your holographic world, the tangled information encoded on your holographic screen is disentangled and the quantum state of potentiality is reduced to an actual observed state. Until observed, everything in that holographic world only exists at the level of entangled qubits of information encoded on the observer's own holographic screen. Each observation is thus a perceptible holistic event in which the entangled quantum state of that holographic world is disentangled, and thus the observation of anything in that world affects the observation of everything else. The coherent organization of the form develops naturally because all the information qubits encoded on the observer's holographic screen are entangled and those entangled information qubits tend to align. The coherent organization of information allows the development of observable forms of information, which self-replicate over a sequence of events. In the sense of quantum theory, each event is a decision point where the quantum state of that world bifurcates, due to the different ways that bits of information can be encoded across all the pixels on the display screen. The observed events of that world are not predetermined, but rather encoded in a quantum state of potentiality, best understood as the sum of all possible paths.

For an integral understanding of the holographic world, it is essential to highlight the distinction between unlimited consciousness—which is the nature of the undifferentiated void that has the inexhaustible potential to create endless finite worlds of forms—and limited consciousness—which is the nature of an individual observer and his observed world—. This limited consciousness arises from the illusory self-identification of the unlimited consciousness with the central character of a given movie. This is a peculiar aspect of existence in a holographic world. The fact that the observer places the focus of attention on the life of his character is what creates the hypnotic spell of self-identification. With personal self-identification, there is the mistaken assumption that the source of the observer's consciousness is that central character appearing in the perceived holographic virtual reality world, which is logically impossible. The observer's body is just one more form of information that appears in his holographic world. When the observer emotionally identifies with a body and takes himself as such, it is as if that body were the subject in the subject-object perception relationship. The observer's body is taken as the perceiving subject, and all other objects that appear in the observer's holographic world are considered as objects of perception. In reality, the observer himself is the subject, and his body is just another object of perception that appears in his holographic world among all other objects of perception. Behind all this illusory game of self-identifications, the ultimate reality is that there is only one consciousness in everyone, but there are many different points of view within that consciousness, each perceiving their own mind and their own world on their own screen. As we have said, the observer must be present so that the quantum state of potentiality can be actualized, from instant to instant, as a concrete state of the manifested world. Thus, when the observer is no longer present, his world and his mind disappear from apparent existence and his limited consciousness returns to the undifferentiation of unlimited consciousness. As Nisargadatta Maharaj stated: *"All limited existence is imaginary. Even space and time are imaginary. The pure being, which fills everything and beyond everything, is not limited. Only the limitless is real."*

Having outlined so far the basic characteristics of the holographic principle, as well as its solipsistic implications, exposed by Amanda Geffer, and its non-dual implications, revealed by Jim Kowall, we believe that we already have the necessary tools to clarify the intriguing parallelism found between the accelerated expansion of the universe and the accelerated unfolding of the evolution of life, which we have raised at the beginning of this addendum. To focus the issue, then, we are going to summarize below some basic points that we have developed in previous addenda or in the initial article.

In order to reach a truly integral understanding of the subject we are dealing with, it is completely necessary to refer to at least three different facets in the All-One: non-dual absolute reality, potential relative reality, and spatiotemporal relative reality.

—**Non-dual absolute reality:** Since all manifested reality inexorably appears in the form of interdependent dualities —subject/object, inside/outside, origin/end—, we can understand them as polar manifestations of a reality that transcends them and that it is “prior” to that dualization. Physicists speak of infinite potential energy in the original quantum void, and sages speak of infinite transparent consciousness in the final mystical void. Our proposal is that these two voids are the same and unique absolute Emptiness, perceived objectively by physicists and subjectively by contemplatives, but which, in itself, is neither objective nor subjective, but unity, identity or indifference of both facets simultaneously.

—**Potential relative reality:** Since non-dual Emptiness is completely devoid of the slightest separation between subject and object, it cannot be perceived in any way. For this reason, if it wants to contemplate itself, it has no choice but to unfold as an original objective pole —basically of energy— and a final subjective pole —basically of consciousness—, fully maintaining its empty essence. Between both poles a wide spectrum of balances is generated between both polar facets, which covers the entire range from the most basic states —of enormous energy and little consciousness— to the highest —of little energy and enormous consciousness—. When this illusory distance of energy-consciousness generated between both poles enters into vibration —like a guitar string— a characteristic fundamental sound and all its unlimited range of harmonic sounds (standing waves) are instantly produced. This means that, let's look closely, from the very originary moment the entire archetypal spectrum of energy-consciousness is already fully present in an entangled and resonant way. The successive second harmonics that arise with the vibration of the original “string” of energy-consciousness are, precisely, the potential levels of stratified stability that will be updated, one after the other, along the successive steps of universal evolution.

—**The spatiotemporal relative reality:** In a previous addendum we have outlined the basic characteristics of the nested toroidal dynamics through which the potential reality of the archetypal foundation is actualized and unfolds in the illusory holographic world of space-time forms. The departure and return, instant after instant, from and towards that foundation, through its finite and fleeting manifestation in and as the holographic space-time, allows one to actualize, one after another, the successive potential levels of stability of the spectrum of energy-consciousness. This intrinsically creative recursive dynamic between “potential reality” and “actualized reality” is mediated by the unified field of memory that, step by step, is gestating at a fundamental level. All the information collected at any point-instant of the manifested world is immediately introjected into the basic field of collective memory, which, in this way, increases, moment by moment, its creative potential. The ultimate claim of the universal evolutionary manifestation consists in reproducing in a broken down and integrated way, in the world of finite appearances, the non-duality of undifferentiated energy-consciousness, characteristic of fundamental Emptiness. It is, finally, the inexhaustible attempt of Nothingness to contemplate its invisible face in infinite ways.

In non-dual absolute reality the object and the subject —energy and consciousness— are *undifferentiated*, in potential relative reality the object and subject are differentiated but *entangled*, and in spatiotemporal relative reality the object and subject they are differentiated and (apparently) *separated*. We can exemplify these three possibilities by representing non-dual absolute reality with 0, potential relative reality with a qubit (unit of quantum information) —which not only has the basic states of 0 and 1, but can be found in a state of quantum superposition, with the simultaneous combination of both states—, and to the relative reality manifested with a classical bit —which can represent one of those two values: 0 or 1, like, for example, in the case of a light bulb, which can be in one of these two states: either on or off. That is, a bit can contain a value (0 **or** 1), a qubit simultaneously contains both values (0 **and** 1), and absolute 0 lacks any type of information... or, rather, it includes everything in an undifferentiated way. The passage of potential relative reality —Kastner's “*quantumland*”, Bohm's “implicate order”, Jung's archetypal “*unus mundus*”, Sheldrake's “morphogenetic field”, Laszlo's “akashic field” or the Hameiri's “unified spatial

memory network"—to the actualized relative reality —the holographic spatiotemporal universe that we believe we inhabit— can be schematized, as we will see below, through the interactive dynamics between the objective (energy) and subjective (consciousness) poles in which the non-dual Emptiness unfolds —the simple absolute Presence, the mere Consciousness-of-Being, the pure Self-Evidence without form, the diaphanous ultimate Identity of everything and everyone—.

What so far we have called potential relative reality bears a suggestive similarity to what students of the holographic principle know as the holographic plate. In both cases, we are talking about a potential field of entangled information that is holographically projected to the eyes of a determined observer as a space-time universe. That is to say, the holographic plate (or potential relative reality) is not located in any particular place or moment in space-time, but, on the contrary, it is the entirety of space-time that is potentially located in the holographic plate. As we have seen above, potential relative reality is the common archetype of all possible world lines unfolding in holographic space-time. All these lines of the world —the different modes of vibration of the "string" of energy-consciousness that runs through the illusory distance between the objective and subjective poles, which we have posited at the heart of our evolutionary hypothesis— start from the same original pole —basically of energy— and are oriented towards the same final pole —basically of consciousness—, but their trajectory can be "tuned" in many different ways, at any of the levels of the energy-consciousness spectrum, from the most basic or material to the highest or spiritual. In the addendum on entropic-syntropic evolution we have explained how potential retarded waves (starting from the original energy pole and flowing forward in time) and potential advanced waves (starting from the final consciousness pole and flowing backward in time) resonate with each other at a certain level of the spectrum —standing wave or musical harmonic—, which acts as a fundamental sound, and with this "handshake" between both flows the transaction is completed —wave function collapse— that manifests itself in a concrete event in space-time. Put another way, "every time an observer makes an observation of something in his holographic world, the entangled information encoded on his holographic screen is disentangled and the quantum state of potentiality is reduced to an actual observed state."

As we have suggested a moment ago, the passage from potential relative reality —the holographic plate— to actualized relative reality —the holographic space-time universe— can be unraveled through understanding the mutual dynamics between the objective pole (energy) and subjective pole (consciousness) in which the non-dual Emptiness is apparently dualized. The key is to understand that the separation process between both poles can be interpreted in two different ways. In one, the object moves away from the subject. In the other, the subject moves away from the object. Let's see each one of them.

From the perspective of the holographic principle, there is no objective physical world out there, but rather everything emerges in a subject-object relationship that occurs when the observer enters an accelerated reference frame and their event horizon acts as a screen holographic when it encodes qubits of information. This accelerated movement is usually interpreted as referring to the expansion of the universal bubble in the eyes of the observer located in its center. What is absolutely amazing about the observer's consciousness is that relativity theory tells us that the observer's central point of view is exactly the singularity of the Big Bang event. So, each observer has their own Big Bang event that creates their own holographic world. That is to say, all the observers of the universe are in the immovable center of the cosmic expansion and have remained there since the beginning of time. At the time of the Big Bang, the universe had a diameter of about one Planck length ( $10^{-33}$  cm), and space has been expanding outward at an exponential rhythm ever since. Each observer contemplates this accelerating expansion of the universe relative to his own point of view at the center of the universe. What we call the universe is actually an observer's own holographic world. As we have said, the expression of dark energy allows the universe to expand and cool as entropy increases, the cosmological constant changes to a lower value, and the observer's cosmic horizon increases in radius. This is how more and more qubits of information for the universe are gradually being encoded as the observer's cosmic horizon increases in surface area. In this sense, as we have commented, Hamein and Curran explain that there is an informational aspect of universal expansion, since the fact that the total information content of the universe constantly increases

requires a growing volume of pixelated space-time within which to accommodate this informational evolution.

Next to this perspective in which it is stated that the objective universe is rapidly moving away — outwards— from the observing subject, we can make another reading in which it is the observing subject that is rapidly moving away —inwards— from the objective material universe. Instead of speaking, then, of a progressive *expansion* of the objective universe, we will speak of a progressive *internalization* in the realm of subjective consciousness. To expose this alternative approach, we are going to recall here, briefly, an idea that we have exposed in our article. We can summarize the entire evolutionary process stating that in the original moment and during the first stages of development of *matter*, the facet of consciousness was absorbed in the facet of energy. With the emergence of *life*, the facet of consciousness jumps inwards, separates itself from mere matter, perceives it, and thus can act on it. With the emergence of the human *mind*, the facet of consciousness jumps inwards again, self-consciousness appears, which is separated from the simple subconscious life, thus increasing the capacity for action on the natural world. With the emergence of the rational *intellect*, the facet of consciousness jumps inwards again, which allows us to think about thought and, in this way, the understanding of how things work and, therefore, the ability to intervene increases exponentially about them. All this process is possible due to the presence, from the very originary moment, of pure consciousness —the “witness” of which the Hindu tradition speaks— as the final pole of the process. Therefore, it should be clarified that this final pole of pure consciousness does not evolve at all —because it remains full and immutable at all times—, but its reflection and identification with the different entities and organisms that develop throughout the process —atoms , molecules, cells, multicellular organisms, vertebrates, mammals, primates, apes, humans...— it does evolve in terms of its ability to actualize that full consciousness, which allows progressively increasing the ability of organisms to capture, store, process and respond to information from the environment. This accelerated evolutionary process has been described by the British theoretical physicist and experimental psychologist Peter Russell as a spiral movement through a “*white hole in time*”, which, displaying increasing levels of complexity, connectivity and consciousness, is heading towards a next final Omega Point.

We have said before that the observer and his holographic world always arise together in a subject-object relationship of perception. For this reason, we propose that the two interpretations of the universal dynamics that we have just exposed —the accelerated expansion of the external world and the accelerated evolution of the internal world—, far from representing two independent realities, are, on the contrary, two complementary descriptions of a same and unique process. When, at the beginning of this addendum, we highlighted the surprising synchrony between the process of expansion of the universe and the process of evolution of life, we suggested that, at first sight, the two phenomena did not seem to have anything to do with each other. But, once the fundamental characteristics of the holographic principle have been exposed, we have understood that these two processes are not only closely related, but that they are, even more, two perspectives on the same and unique reality. The increase in the number of information qubits as the observer's cosmic horizon expands is nothing but the objective expression of the growth in the capacity to actualize subjective consciousness in the successive organisms that unfold throughout evolution. Viewed in this way, the total formal and chronological similarity —described in the first paragraphs of this addendum— between the global expansion trajectory of the universe and the global evolutionary deployment trajectory, far from being a mere coincidence, is the expression logical and natural from the fact that both processes are only two partial perspectives of the same and unique subject-object process. So, we can say, indistinctly, that the universe expands because life evolves or that life evolves because the universe expands. Ultimately, subject and object are not two, but the simple illusory appearance through which the non-dual Emptiness tries to contemplate its eternally invisible face.

(Note: The English version of this Addendum 9 is made using Google translate)

## 2. THE NON-DUAL KEY

Having tested our hypothesis of developmental and evolutionary rhythms' with both the data referring to the macrocosm —paleontological, anthropological and historical— and with the microcosm —embryologic and psychological—, and having verified the surprising precision of the forecasts, both in terms of the chronology of the cycles and their content —matching the hierarchy of the *chakras*—, it is obvious that we cannot talk of “fortuity”. It does not have anything to do with chance, and we can categorically state that there is something fishy going on in Evolution.

From the materialistic paradigm, all of this seems inconceivable. It does not coincide at all with many of the core dogmas of official science. However, the facts are there and it is not possible to ignore the evidence. From this platform, I invite anyone that wishes to do so to seek an explanation to this massive avalanche of closely coordinated chained “coincidences” in diverse fields.

We shall now outline, in telegraphic form, our “philosophical” proposal so as to put forward the ultimate meaning of everything we have seen so far. We shall develop this proposal in greater detail throughout this second chapter.

All manifest reality appears, inextricably, in the form of dualities. No form of expression is possible outside this play of the opposites. We cannot find sound without silence, subject without object, inside without outside, and so on. All opposites are mutually dependent and therefore we can understand them as polar manifestations of a reality that transcends them and that is “prior” to this duality itself.

In the various graphs that we have used, for example Fig. 7-A and 7-B, we can see how the course of evolution starts at a pole of maximum energy (and practically no consciousness at all) and ends at another pole of maximum consciousness (and practically null energy). Physicists talk about an infinite potential energy amidst the original quantum void, while sages talk about a clear infinite consciousness in the final mystical void. We propose that these two voids are the same and unique Void, perceived by physicists objectively and by contemplative people subjectively, which in itself, is neither objective nor subjective, but “prior” to that dual perspective. And the most fascinating thing of all is that this Void is not a distant metaphysical reality, but the simple and pure Self-evidence of each and every present moment.

As there is no separation between subject and object in this Self-evidence, it is not possible see *it*, because there is not “anything” that could be seen by “someone”, but neither is it “nothing”, because in fact all things in the universe —both objective and subjective— are mere partial and relative forms of this Self-evidence. And although it is, therefore, unutterable, unexplainable, we may point to It, talking about the empty, self-luminous plenitude.

In order to be able to “see” Self-Evidence, it needs to polarize Itself, at least apparently in subject and object, the same as 0 may become dual in +1 and -1 without changing, other than formally, its absolute value. We say this because our ultimate proposal is that, in order for Self-Evidence to contemplate Itself, it apparently splits in two poles: the original (basically, energy) and the final (basically, consciousness), generating an illusory distance among them which, on vibrating —like the guitar string in our hypothesis— gives rise to a whole scale of harmonics, which are precisely the levels of stability that create the evolutionary cycles that we have discussed here which span the entire range, from the most basic —of enormous energy and little consciousness— to the highest —of little energy and enormous consciousness—, that harmoniously channel the so-called game of chance. (Note the parallelism between the hypothesis we are proposing here and “superstring theory”, although the scope of application in our case is not simply reduced to the world of microphysics, but embraces the entire spectrum of reality).

If we see the things from this perspective, the entire avalanche of “coincidences” that we have revealed here, which are totally unacceptable for the materialistic worldview, are shown to be natural manifestations of That-Which-Is. Or the teleological character of evolution, so denigrated by official science, is understood

here as the logical expression of the fundamental structure of what is Real. Or the progressive emergence of consciousness, which is often completely forgotten in many branches of sciences, is presented in our non-dualistic approach as a simple appearance of the infinite lucidity of the ever-present Self-Evidence. Is it not time already to change the paradigm?

In the following sections, we shall propose the intrinsic non-dual nature of these apparent antagonistic poles of energy and consciousness between which the flows of the universe unfold. We shall attempt to enrich our presentation by making possible references to various schools and traditions –scientific, philosophic or spiritual– that unequivocally defend non-dual approaches.

### **An approach to non-duality.**

A basic observation is required here to understand the phenomenal world: all manifest reality inexorably appears as dualities. It is not possible to perceive any figure if there is not, at the same time, a background from which it differs and stands out. It is not possible to contemplate a star without the dark space surrounding it. And although we might pay more attention to one or the other aspect in isolation, the integral unity of perception is always an inseparable relationship between figure and background.

We are only able to perceive something when differences appear in the field of our consciousness. Without contrasts, we would not capture anything. No expression is conceivable outside the play of opposites. It is not possible to find cold without heat, sound without silence, light without darkness, right without left, inside without outside, subject without object, or birth without death. Each of opposites is only noticeable in relation to the other. They are mutually dependent. All opposites arise simultaneously and reciprocally, and are completely inseparable. Thus, Heraclitus stated that the existence of multiplicity requires opposition, discord and struggle. Yet, explicit enemies are obviously implicit allies, as they need one another to exist, and therefore can never present themselves separately. Like two sides of a coin. Like the poles of a magnet.

The principle of polarity is based on the evidence that positive and negative are different aspects of one and the same system. To perceive opposites as polar means to recognize this intrinsic unity between the extreme terms of a single whole. From this perspective, it thus does not make sense to consider the poles of any duality as truly independent realities, and, much less, to try to remove one of them for the benefit of its antagonist –as is often attempted–, because, if this were done, both would automatically disappear. One will never be able to vanquish the other. It is useless to fight against one's own shadow. Duality can only be overcome by accepting it.

It therefore seems wiser to go beyond any exclusive identification with one single half of reality; i.e., to transcend any disruptive opposition, and thus achieve new levels that are more comprehensive and integral. From there, it will be possible to find healthy dynamic balances between these pairs of opposites, through which life manifests its infinite wealth.

It is not a question of seeking tenuous, insipid uniformity by removing the contours and differences in the forms of the world, but of discovering the underlying unity of all antagonisms. We are not talking, therefore, of one in opposition to many, but rather of a unity that creates, maintains and embraces all the multiplicity of the universe. Neither are we proposing achieving a future synthesis of everything, but rather of discovering the present non-duality that simultaneously embraces the one and the many. We have no need to unify a diversity that has never been divided.

Unlike monism and dualism, this non-duality goes beyond polarities without excluding them and contains all relativities without identifying with any one of them. What is real is, therefore, neither one nor two. Nothing can be said about it, because ascribe any particular aspect to it would be to deny its opposing facet. What occurs is that our dualistic thinking establishes boundaries between affirmations and negations, and forgets

the reciprocity and interdependence of opposites. Dualities are essentially creations of our relative language, which divides reality into antagonistic pairs and attempts to successively recompose it via intermediate positions. Ultimately, however, it is unable to define or name That which lacks opposites. In fact, we should not even call it “non-dual”, because, as we have stated, far from opposing dualities, it constitutes and encompasses them.

Thus, given that reality as a whole has no opposite term and hence dualistic thinking is powerless to grasp it, only a non-dualistic view, devoid of any conceptual elaboration, could provide evidence of the One without second we are talking about here. All mystical traditions affirm the existence of this intuitive, intimate, direct and immediate knowledge, able to discover reality without separation between the observer and the observed, and through paradoxes try to suggest that this ultimate truth is a “coincidence of opposites”. As stated in the apocryphal Gospel according to Thomas, “When you make the two one, and you make the inside as the outside and the outside as the inside and the above as the below, [...] then shall you enter the Kingdom.” For, as the Sufis state, “there is no room for two in the universe”.

Non-duality is simultaneously static and dynamic, eternal and temporal, manifest and non-manifest, transcendent and immanent, as these terms are no more than relative mental representations of the ineffable. Non-duality goes beyond any type of distinction, and yet, is the one and the many, being and becomings, silence and sounds, the infinite and the countless finites of the world. Nothing exists outside That because its opposites are, indeed, only aspects of itself. It can be infinitely all things, because it is not any particular one, and therefore it is unlimitedly free to manifest itself in any form, without suffering the restrictive effect of its own creations. Like the water of the ocean playing eternally in its fleeting waves.

### **Beyond materialism and spiritualism.**

Simplifying the issue a great deal, we can say that Western science has tried to understand the universe from the perspective of material reality, while Eastern mysticism has situated the foundation of everything in the spirit world. Advocates of the former approach could not find minds on their lab desks, while those of the latter approach could not assure an existence other than that of their own individual consciousness.

Classical science considered consciousness as a simple epiphenomenon of complex matter; an unusual, random and insignificant accident that emerged at a certain stage of biological evolution. A mere by-product of the chemical reactions and electrical interactions between neurons in the brain of some developed organisms. The mind was thus reduced to a pure material aspect.

Spiritual traditions, from the opposite perspective, proposed reducing matter to a mere mental aspect. Consciousness, they stated, constitutes the primary reality of existence, the essence of the universe and the basis of all being. In its purest form, it is formless and immaterial. The objects of the world are mere forms of that original consciousness. Thus, far from producing consciousness, matter simply restricts and circumscribes it within certain boundaries.

Today, a third, more integral approach is gaining strength, one which argues that energy and consciousness are both the dual –exterior and interior, objective and subjective– expression of a reality that encompasses and sustains these polar opposites. For there is no inside without outside, no surface without depth, no object without subject. Or vice versa. There is hence no room for exclusively material or purely spiritual beings. This third approach, which transcends both monism and dualism, states that matter and spirit are only two abstractions arising from language, and that what is real is always the non-duality of both, an ineffable unity-in-diversity.

Under this approach, all phenomenal reality presents an outer or material facet, and an inner or mental aspect. Innerness is therefore not an exclusive domain of the human being, but rather a basic feature of all

the manifest world. As stated in the new science, the “subjective obverse of the brain”, i.e., the field of consciousness, far from being an anomaly in the universe, is undoubtedly an evident symptom of a fundamental aspect of reality.

From this integral approach, it no longer makes sense to state that the mind is mere matter, or that matter is only mind. Rather, it should be maintained that consciousness is the subjective, inner facet of energy, and that energy is the objective, outer aspect of consciousness. Both are correlative and complementary aspects of a single reality, energy-consciousness which transcends our dualistic concepts. Perceptual unity always embraces both inner consciousness and the outside world, and highlights the fundamental and irreducible relationship of both aspects in the phenomenal world.

With their extreme standpoints, materialists and spiritualists investigate only one facet of reality and scorn the other half of the world they exclude. The former, by attempting to deny the subject reducing it to the object, and the latter, by trying to deny the object, reducing it to the subject, embark on an impossible task. Matter and spirit are inexorably present like two sides of the same coin. It makes no sense, therefore, to give priority to only one of the poles, because they never appear in isolation. No aspect is superior to the other. Together they construct the world.

It is beginning to be understood that a materialistic philosophy that totally denies the spirit is as biased and arbitrary as a spiritualist philosophy that completely denies matter. Pure materiality is as inconceivable as pure spirituality. The two views require reconciliation. We cannot reduce either of the poles to a simple function of the other. It both the subjective side of the mind and the objective aspect of the world must necessarily be taken into account. In the phenomenal world, it is not possible to find formless matter, or form without matter. There is no nature outside of the mind or mind outside of nature.

Science without consciousness can destroy the world; consciousness without science can be vain. We cannot ignore the need to integrate both the inner and outer aspects of reality. The inner vision of the mystic and the outer experimentation of the scientist should provide complementary approaches for an integral picture of reality. A model may thus be fashioned that is capable of harmonizing the fragmentary truths of materialism and spiritualism, while at the same time avoiding the distortions produced by their biased perspectives.

Realism considers the universe as outside and independent of consciousness. Idealism, on the other hand, states that consciousness is the very substrate of the universe. However, any attempt to afford the world or the mind the status of independence is eventually proved to be wrong. The new current of thought that is beginning to take shape is supported by both realism and idealism, but goes beyond and transcends both approaches. It treads the razor's edge between realistic objectivism and idealistic solipsism. Situating itself beyond both spiritualism and materialism, it blurs the boundaries between spirit and matter. It embraces, as did the Taoists, a materialistic concept of the spirit and a spiritualist concept of matter. For, as the classical philosophers stated, if you want to justify the reality of being and the truth of knowledge, it is necessary to become a being that is not purely objective, but which embraces knowledge within itself, or knowledge that is not purely subjective, but embraces being in itself.

Postmodern thought denies that there is an objective reality outside our experience of it. It argues, in contrast, that nothing exists independently of or unrelated to our process of cognition, and therefore, in order to believe in a pre-given territory of which we can construct a map with a pre-given mind is completely naïve. Hence, when we seem to be exploring the outer universe, we are largely investigating our own inner landscape. And conversely, when we delve into consciousness, we irremediably encounter the outside world.

The separation between the observer and the observed, which was the basis of classical science, has completely vanished. Alleged objectivity, untainted by any form of human appraisal, has proved to be an

illusion. According to the new science, the “outer” world does not possess an independence of its own, but rather is inextricably linked to our perceptions. What we observe, it claims, is not nature itself, but nature exposed to our method of questioning. What we experience is not external reality, but our interaction with it. Properties belong to these interactions, not to independently existing things. We do not observe the world, we participate in it. The world does not consist of things, but is rather an intricate web of interrelationships between the inner and the outer in the endless play of creation.

The structures of matter and the structures of the mind, like the images of two mirrors facing each other, engender one another. Neither objects nor subjects exist in or of themselves; each exists through the other. Our consciousness is not separate from some other universe; both are intimately involved in a complex process of mutual feedback. The world shapes our mind, at the same time as our mind shapes the universe. We are shaped by our environment, and we simultaneously shape this same environment. As it has been stated, “the human spirit reflects a universe that reflects the human spirit”. And also, “the world lies within our spirit, which in turn lies within the world”.

### **Energy-consciousness.**

Starting out from an integral approach, which includes the two basic facets of reality –energy and consciousness–, we can construct a complete description of our evolutionary ladder, both from “outside” and from “inside”. It is clearly not a question of two separate worlds, an outer or material world and an inner or spiritual world, but only one world, which can be approached in two complementary ways: objectively and subjectively.

On the one hand, we would speak of atoms, molecules, cells or neural cords, and, on the other, of irritabilities, feelings, perceptions or impulses. In short, however, we would be talking of an identical course of history describes from two irreducible spheres. The lower rungs would have very dense energy and very slight, almost non-existent consciousness, while the higher rungs would be characterized by very subtle energy and a consciousness of great clarity. Between these, the full range of levels of stability formed by the various possible balances between these two realms of the phenomenal world would develop, i.e. the Great Chain of Being.

All this is somewhat reminiscent of the idea put forward by Giordano Bruno to the effect that, as God is at the apex and Matter at the base of the cosmic scale, everything on this scale is made up of Matter and of God, since nothing would have come into existence in the universe without the concurrence and merging of the two poles. As stated, the whole is a unique and immobile substance which, as such, is neither form nor matter. Only outward appearances change and perish. What remains itself is matter-form (energy-consciousness) as a whole.

From our point of view, we could say that the “substance” that constitutes the totality of the universe is neither matter (or energy) nor consciousness, but non-dual energy-consciousness. Ineffable conscious-existence, or existent-consciousness, which is not so much the substrate of the phenomenal world – as it is neither separate nor different from it–, but its true non-dual nature in every moment, its ultimate comprehension and reality. The various planes of nature, both in the macrocosm and the microcosm, can thus be understood as different modes of expression of this single basic reality, comprising uninterrupted stages from matter to spirit. As we shall see later, this identity of origin is what allows the integration of all these evolutionary levels, which, we once again insist, are but diverse projections of a single, basic energy-consciousness.

However, the different possible balances between these two fundamental aspects allow one or the other to be perceived as primary or secondary depending on the circumstances. Thus, for example, energy is the central facet in research in physics, while in the contemplative realm, greater emphasis is placed on the

field of consciousness. Therefore, although the spiritual traditions affirm that the ultimate truth is the non-duality of energy and consciousness, the fact is that in the relative world, monistic –materialistic or spiritualistic– and dualist–the interaction between body and mind– schema may be pragmatically admitted, depending on the subjects under study.

The problem arises when these relative approaches are taken as absolute truths. Thus, monistic materialists and realists –who defend the pure objectivity of the world– only consider the energy aspect of the basic polarity and end up reducing the great chain to the lowest rung. Meanwhile, monistic spiritualists and idealists –who maintain the mere subjectivity of all phenomena– only consider the conscious aspect, and end up restricting the entire great chain to the highest rung. A more integral approach, as we have stated, should understand that polar opposites arise simultaneously and reciprocally, and are hence absolutely inseparable.

Below the first rung of evolution, science intuitively feels the virtual, undifferentiated energy in the quantum void, and above the top rung of this same process, spiritual traditions discover likewise undifferentiated pure consciousness, in the mystic void. Before the first differentiation of energy –the Big Bang– and after the ultimate differentiation of consciousness –illumination–, not even the slightest separation between the two aspects of phenomenal reality arises. Beyond the manifest universe, energy is consciousness and consciousness is energy, or, rather, it no longer makes sense to use these dualistic terms.

All non-dualistic traditions of wisdom insist on this identity of origin between light (energy) and lucidity (consciousness). Again and again they affirm that, in the deepest state, the mind-body duality is transcended, and reality is revealed as pure self-aware luminosity or sheer self-luminous consciousness. Hence, the “enlightened” so often compare this primal reality with a bottomless abyss of indescribable light or an unfathomable field of infinite consciousness, and insist that the polarity between these two aspects is completely overcome. In this respect, they frequently suggest that the basis of reality –its true nature– is a diaphanous space of infinite clarity and luminosity that transcends any concrete determination or appearance. From this perspective, all phenomena in the universe are perceived as the different fleeting forms in which this self-luminous, boundless, empty, ever-pervading and indescribable consciousness that sustains and envelops us manifests itself.

The startling claims of science about the mysterious properties of light point to suggestive parallels with the mystics’ descriptions of consciousness. Thus, the possibility begins to take shape that there is, in all truth, an underlying identity between the light that physicists discovered in the fundament of the objective world and the consciousness that mystics found in the depths of the subjective realm.

The new science claims that light lacks mass and therefore does not form part of the relative, material world. Light is, in fact, considered as absolute. It is beyond space and time, as the spatiotemporal interval between the emission of a light beam and its absorption is always zero. Light thus travels non-existent distances in instant time. It might, in fact, be stated that light only exists in the moment without duration that is now. Consciousness likewise has neither mass nor does it form part of the material universe. It is also beyond space and time –in fact, it contains them– and exists only in the present moment. Both light and consciousness, in their eternal now, respectively embrace the entire spectrum of the outer and inner worlds. Thus, they may well be simply polar aspects –objective and subjective– of one and the same ineffable non-duality in its perpetual and prolific creative opening.

### **The central archetype.**

Archetype means “the original pattern” or “primordial mold”. For mystics, archetypes are the basic molds which all manifest reality is based. They are the first forms that emerge from the undifferentiated, the subtle seeds that are projected across the entire spectrum of existence. According to most spiritual traditions,

these archetypes are patterns of radiation, energy currents, sounds or vibrations from which the phenomenal world condenses. Thus, according to the Jewish Kabbalah, the universe is the infinite reverberation produced by pronouncing the hidden, secret Name of God. While in the Christian tradition, it is said that in the beginning was the Word... and that all things were made by Him.

Based on our findings in evolutionary research, we propose that this archetype, which is phenomenally projected as the Great Chain of Being, is precisely the first differentiated expression of the fundamental identity between energy and consciousness. This first archetypal image of the unimaginable will have been generated as a result of the polarization of these two aspects of reality, maintaining a dynamic unity between them. From unity springs the dyad. The holographic reflection or projection of this “bi-unitary” image in every corner of itself, over the “distance” created between both poles, gives rise to the world of multiplicity and limitation, covering the full range of possible balances between energy and consciousness.

We are thus presented with three basic areas of reality: the undifferentiated or fundamental identity between energy and consciousness; the bi-unitary archetype or polarized image of the undifferentiated; and the multiple universe or holographic reflection –macrocosmic and microcosmic– of the archetype in the limited, phenomenal world. We shall return to this issue later.

We can illustrate our proposal of the central archetype, assuming the form used by Hinduism in this respect. According to this tradition, the sound *Aum* (Om) is the root note of reality, the seed of the universe, the original expression of the silence of the undifferentiated, the primal vibration of creation. All the past, the present and the future are contained in this sound without beginning or end. It is said that nothing apart from it existed, exists or will ever exist. It is thus the origin, the middle and the end of all things, the substrate of the entire universe, the source and goal of all manifestation. In short, it encompasses the entire range of the phenomenal world, just as white light comprises the full spectrum of light.

The monosyllable *Aum* symbolizes the full range of sounds, from the more open (a), representing the grossest levels of energy at the base of the evolutionary ladder, to the more closed (m), corresponding to the subtler, more elevated planes of consciousness, passing through all the intermediate stages (u). After passing through the physical (a), mental (u) and spiritual (m) envelopes, the sound gradually dissolves into the silence of the undifferentiated, from which it will subsequently emerge to create a new harmony. Thus, the entire universe is renewed, from moment to moment, within the primordial reality. Eternally. At each now.

The Trinitarian dynamics embraced by the Christian tradition, also has an obvious similarity with our bi-unitary archetype. It talks of a triune God, with three different facets –Father, Son and Holy Spirit– in one single God. The Father represents power, creative energy; the Son, wisdom, embracing consciousness; and the Spirit, love, the unifying dynamics between the Father and the Son, which thus expresses non-duality or bi-unity between the poles of reality, i.e., between energy and consciousness. If the Father and the Son are not two, are neither they one, as the Spirit unites and distinguishes them at one and the same time. There is absolute relativity between the three divine “persons”, as they imply and include one other; none of them being the whole or the others. The seer (inner consciousness), the seen (external energy) and the act of seeing (the relationship between the two) are not three separate entities, but rather three aspects of a single process, in which it is not possible to find one of them without the presence of the others. Problems arise with the emergence of identification with a limited reflection of this Trinitarian archetype (or bi-unity), which deceptively separates what is actually eternally indivisible.

The dynamics of Trinitarian “circularity” consists in the permanent “exit” of the Father (energy) from the undifferentiated to beget the Son (consciousness), and in the incessant “return” of the Son to the undifferentiated, to start over again, from moment to moment, the eternal creative circuit in which the entire universe appears. The act by which the Father begets His Son is thus the same act in which all the world’s creatures appear. That is, with the Trinity, with the first manifestation of the unmanifest, the whole universe

and all things emerge and eternally remain within it without separation, being, in fact, God Himself. The bi-unitary archetype is thus the original nucleus and dynamizing element of the entire self-organizing cosmos, which is present in the centre of all beings and is phenomenally manifested in them in highly varying degrees.

Everything we have said about Christian Trinitarian dynamics applies to the *Trimurti* in Hinduism. It is said that the original archetype, or *Ishvara*, expresses itself as a trinity in the form of *Brahma*, the creator, the power of being, *Vishnu*, the preserver, compassionate love, and *Shiva*, the destroyer, consciousness that eliminates what is false, in an eternal movement resulting in the totality of the manifest world. Similarly, the three essential aspects of the single reality envisaged by Hinduism clearly coincide with the three aforementioned facets in Christianity: *Sat* represents being, *Chit*, consciousness and *Ananda*, joy. A monistic unity is not being proposed here either, but rather a bi-unitary reality in which being and consciousness inseparably merge in a communion of eternal joy. Here too, the whole universe is the reflection of this *Sat-Chit-Ananda* in different balances of its three, seemingly separate facets which however invariably maintain in their core, its secret and unchanging unity.

### **The play of Shakti and Shiva.**

According to the Tantric traditions, the supreme state is a supracosmic Emptiness or Void –*Mahabindu*– that contains all, a unified field that is the source and essence of all life. To make the universe emanate, this primordial Void, neutral in source, is polarized according to a female, energy aspect –*Shakti*– and a male, conscious aspect –*Shiva*–, which in Samkhya philosophy are respectively called *Prakriti* (matter) and *Purusha* (spirit). The feminine principle thus represents the cosmic flow of power and energy, while the male principle symbolizes the source of all form and consciousness. Both facets constitute the basic polarity generating all the creative dynamics in the universe.

The central doctrine of Tantrism affirms the radical identity of creative energy and pure consciousness. The origin, they say, is the integral unity of the masculine and feminine archetypal principles. If evolutionary creativity is understood as a process of interaction between these two principles, a unifying field must necessarily exist, of which –yet again– these principles are their polar expressions. Thus, the tantric schools insist on the ultimate union between the transcendent, ascending God –*Shiva*– and the immanent, descending Goddess –*Shakti*–, a union that is based on an essential core devoid of any differentiation. This is expressed in a very concrete way in the images of *Shakti* and *Shiva* in sexual embrace. Similarly, in the Taoist tradition, *yin* and *yang* are represented intertwined within a circle that unifies them.

Fundamental *Shiva-Shakti* is imperishable. All the evolution that we see in the world is but the apparent unfolding of that primordial polarity. It is therefore always the same *Shiva-Shakti* that manifests across all levels, from the original simplicity to the most differentiated forms involving an enormous internal complexity. All forms are transmutable between one another, because they are all essentially the single Consciousness-Power.

At the beginning of the evolution of the world, all the forces of the universe were concentrated at the metaphysical energy pole. That is when consciousness began to be reflected over that potential energy, which, inspired by this presence, began its process of expansion towards its antagonist pole. Creative energy –*Shakti*– thus attempts to rebuild in the manifest universe the original union with pure consciousness –*Shiva*–, from which, ultimately, it has never been separate.

Given that, according to the tantric point of view, the human body is a microcosm that reflects the universal macrocosm, the same evolutionary process that takes place between the masculine and feminine poles of the universe is reproduced in full in the dynamics of the development of individual beings, through the system of *chakras*. From the viewpoint of current transpersonal psychology, this system offers the most

complete explanation known to date of the evolution of human beings and their potential for energy transformation. The *chakras*, as we have already seen, are the energy centres of transformation that correspond to the different developmental levels. They thus symbolize the successive stages of development of consciousness and represent the frameworks through which reality is interpreted.

In the human body, the potential cosmic energy, the primordial *Shakti*, takes the form of *Kundalini*, or the “coiled” serpent, which is housed in the first *chakra* –*Muladhara*– at the base of the spine. While this serpent remains asleep at the root of the tree, the consciousness of the human being is enveloped in darkness and ignorance, identified with the material world. But when the originally hidden and dormant *Kundalini Shakti* wakes up and is free to uncoil, it ascends through the successive psychic centres or *chakras* that lie along the spine as potentials of consciousness, to unite above the crown of the head with *Shiva*, pure consciousness, in the seventh *chakra* –*Sahasrara*– or the “thousand-petalled lotus”. Through this process of continual internalization, the *Shakti* finally reaches its full flowering, i.e. the fusion of cosmic Power with cosmic Wisdom, thus destroying the illusory distinction between the subject and object of consciousness. The primordial non-duality of creative energy and pure consciousness is therefore made manifest. The cosmos and human beings return in this way to the absolute Void or *Mahabindu* which they had really never left.

### **Potentialization, actualization and integration.**

Some scholars of energy flows in dynamic systems claim that, for energy to manifest, it needs to pass through a state of potentialization to one of actualization. If this were not so, everything would be static and there could be no kind of exchange or system. For energy to be maintained in a state of potentiality, there must be an opposing force in a state of actualization that prevents it from manifesting. Thus, all energy always has its antagonist, so that when one is realized, the other is potentialized, and vice versa.

We stated in a previous section of this book that the lower rungs of our evolutionary ladder had very dense energy and very slight consciousness, while the higher rungs were characterized by very subtle energy and a consciousness of great clarity. As a general principle, it can thus be said that the higher the energy, the lower the structure and differentiation of systems, and, conversely, the more energy is potentialized, the more its antagonist facet, consciousness, is realized. For example, in human beings, the greater the expansion of consciousness, the lower the frequency of the brain’s electrical activity. That is, the slower the rhythm of the electroencephalographic waves, the more intense the manifestation of the characteristics of transpersonal and spiritual levels.

According to this perspective, the actualization of the physical facet took place at the time of the Big Bang, while the mental aspect remains in a potential, unconscious, but not absent state. Throughout the evolution of the universe, physical appearance suffers, overall, an entropic process of thermodynamic degradation towards thermal death, whereas, in contrast, the psychic aspect enjoys a fundamentally syntrophic development of increasing information and insight. That is, consciousness, almost entirely potential at physical levels, is progressively realized in successive sheaths –life, mind and soul–, while, conversely, energy is potentialized during the same process. It has accordingly been said that evolutionary dynamics shows two antagonistic tendencies: “There is a reality that is becoming a reality that is fading away”. And also: “Life ascends the slope that matter descends”.

Before the Big Bang, reality is “chaos”, i.e., the state prior to differentiation between order and disorder, between the psychic and the physical, between consciousness and energy. At the beginning of the universe, entropic disorder and syntrophic order are therefore at their minimum. Thereafter, both grow in constant conjunction. Order and disorder are deployed simultaneously and are completely inseparable. As disequilibrium thermodynamics shows, it is precisely disorder, caused by the maintenance of the stationary

states, which allows the creation of new, more complex orders and, ultimately, the emergence of evolutionary novelties.

We would like to stress here that, under normal conditions, these new emergent levels, with weaker, more flexible energies and greater levels of depth and consciousness, develop in an integrated manner with all the levels that emerged previously along the course of evolution. Thus, any organism or system simultaneously includes in its own structure the entire spectrum of steps followed from the origin to the present moment, the entire range of balances between energy and consciousness in their different degrees of actualization or potentialization.

The overall process thus seems to point to a final integration of the entire spectrum of reality, from the creative energy of the base to the pure consciousness of the summit, thus reflecting in both the finite and relative realms the identity of the two poles in the absolute. It is, therefore, as the Taoists would put it, a question of achieving in one's own body the union of the two cosmological principles, heaven and earth, to reproduce in the universe the primordial situation of chaos, the lack of differentiation that existed before creation. It is important to emphasize the need to integrate both principles simultaneously to avoid alienation of one or other of the poles, which would fatally lead to despiritualized matter or disembodied spirit.

The mystical process, which is no other than the vanguard of the evolutionary process, is simply the progressive unfolding and integration of new levels of existence, i.e., the permanent enlargement and unification of the course of the entire scale. Through the art of meditation, the aim is to let the focus of attention move into deeper and subtler sheaths, simultaneously embracing the denser, more superficial sheaths already explored. Resting one's feet on the bottomless abyss of virtual energy and glimpsing the light without shadows of diaphanous consciousness up on high, as a human being one thus begins to intuit the radical identity of these apparent opposites. But until this basic unity beyond illusory multiplicity has been integrally experienced, until the ultimate lack of differentiation between energy and consciousness, of being and understanding, of the object and the subject, has been discovered, it will seem that there is still a path to follow. Only when the circle is closed and both ends touch will experience will be truly definitive.

As stated in integral yoga, the closer one gets to the summit, the more one reaches the bottom, as each cycle closes a little closer to the Centre, where heaven and earth, the highest and lowest, the future and the past finally meet in an eternal present. The supreme opposition is thus revealed as the supreme identity and there is but one integral unity that includes everything and transcends any trace of differentiation between outer and inner, energy and consciousness. The ever-present evidence that matter is really spirit and spirit is truly matter is thus revealed.

### **Pointers to a common source.**

From different fields of research, everything seems to point to a single source, located outside spatiotemporal frameworks, as the common source of both energy and consciousness. Heaven and earth, spirit and matter, the subjective and the objective would thus be radically identical in ultimate reality. According to this perspective, there would be a primordial, undifferentiated unity from which the entire manifest universe stems, beginning with the fundamental duality of energy and consciousness. In this ultimate sphere of reality, both poles would be unified, but in the world of becoming they would play opposite, complementary roles. Because, although the primordial fundament transcends all polarity, to the extent that it manifests itself in an evolutionary way, it must also have the self-limiting capacity to establish—at least apparent—differences in itself. The limitation is thus the price undifferentiated reality has to pay to manifest itself.

Evidence of this undifferentiated reality, simultaneously empty and full, can only be disclosed in an integral, definitive experience that transcends any trace of division between subject and object. We shall address this point in greater detail in the third chapter of the book. Nonetheless, even without actually discovering this ultimate experience, clear indications emerge in different fields of relative knowledge that point to this common fundament, existing beyond all polarity. We shall now outline some of these proposals made from the fields of philosophy, psychology and physics.

The rationalist philosopher Baruch Spinoza, for example, stated that extension and thought are two omnipresent attributes of the universe, as it present itself to limited human understanding. Everything can be seen as matter –or extension– and consciousness –or thought–, but both facets do not constitute different realities, but different manifestations of a single, underlying reality. That is, the universe can be thought of as a physical system, i.e., as a system of things with extension in space, but also as a system of souls or thoughts. However, these are not two independent systems, but only one, which can be conceived in two different ways. Both conceptions are complete in themselves, but one does not reduce to the other: we cannot conceive of thought as a modification of extension, or extension as a modification of thought. They are two aspects of a single reality; two attributes of a single substance. According to this approach, the human being is not composed of a body and a soul. Rather, these are different modes of the same substance. The body and the soul are thus one and the same thing, which is expressed under one or another attribute. Each modification or change in state of a body necessarily involves a modification in the soul, because, in fact, there is only one Nature conceived by us in two different attributes.

The idealist philosopher Friedrich Schelling also tried to unite the relative aspects of object and subject in an absolute that is not reducible to either of these poles, given that it had to be, at one and the same time, the fundament of both. He understood that purely spiritual activity could not explain the birth of the natural world, nor would a purely objective principle be able to clarify the origin of intelligence and of the self. Given that there is no nature that is purely objective, nor a spirit that is purely subjective, inquiry regarding nature would necessarily come to include the spirit, and research into the spirit would inevitably come to include nature. The supreme principle must therefore have been an absolute that was both object and subject, nature and spirit; that is, unity, identity or the absence of difference between the two poles. He thus proposed an identity of thought and self-valid only in relation to essence, but not in relation to existence, and polarities distinguishable only in the phenomenal world, but completely undifferentiated in its underlying reality. According to this approach, both knowledge and being, consciousness and energy, were thus only different reflections of a single absolute.

The analytical psychologist Carl Gustav Jung stated, in a similar vein, that it is extremely likely that mind and matter are two different, complementary aspects of one and the same thing, the transcendental *unus mundus*. The phenomena of synchronicity –significant coincidences– point in this direction, as they show that there is a notable correlation between subjective perception and objective processes, without there being a causal link between the two. In these phenomena, the inner world and the outer world are in a permanent specular relationship of mutual reflections, which suggests a common underlying unity of both. Simultaneous expressions in the domains of the psyche and matter which occur in synchronicity suggest the existence of a single psychophysical all which we observe via two different pathways. This all presents itself as matter if viewed from the outside, and as psyche, if viewed from the inside, but in itself is neither psyche nor matter, but entirely transcendent. The hypothesis of an underlying potential matrix, beyond any kind of division in these two domains we perceive as separate in everyday reality, thus builds a bridge between the physical and mental worlds. Synchronistic phenomena are thus understood as dual, spontaneous manifestations of the unknown fundament that is the basis of matter and mind, energy and consciousness.

Noteworthy among the various interpretations of the data provided by quantum physics for its philosophical scope is that of physicist David Bohm. He posits a fundamental or implied reality, of which matter and spirit are but two complementary aspects in its projection or manifestation. Under this approach, neither energy

nor consciousness is hence the ultimate. Rather, both facets are rooted in something unknown, which is beyond them, where they are reconciled and unified. This common fundament, where consciousness and energy are no longer separate, is a more comprehensive, profound and intimate reality that has a higher dimensionality. Bohm proposes that the universe is an undivided wholeness in a state of flux between this deep or implied realm and the outer or explained world. Here, mind and matter are not isolated substances, but rather different aspects of this unique integral and continuous movement he calls “holomovement”. Neither of these two aspects is therefore considered inferior to the other, as they are understood as correlative categories of reality which always remain united and interwoven, as are form and content. Thus, mind or matter cannot be explained in terms of the other, nor be reduced to one another, as both are mere abstractions of an inseparable unity that is neither spirit nor matter. In this multidimensional fundament, energy and consciousness are, radically, one single reality.

### **The three faces of the Void.**

In the first sections of this book, we set out our hypothesis regarding the rhythms of macro- and microcosmic flows that unfold between an original, energy pole and a final pole of consciousness. Subsequently, we have argued the intrinsic non-duality between these two poles. We shall now briefly suggest three meanings of the term “non-duality”, each of which will provide nuances of interest for the integral understanding of our proposal. We also wish to state that we will use the term “emptiness” here exclusively as a synonym for “non-duality”, and in no case whatsoever in the nihilistic sense. Thus, when we speak of “emptiness”, it will be the same as speaking of “non-duality”.

When we say that reality is non-dual, this statement can be interpreted in three different ways: 1) All polarities of the phenomenal world originate simultaneously and reciprocally, and hence are non-dual. 2) The original fundament of everything is prior to any differentiation and, in itself, is logically completely lacking the slightest trace of duality. 3) The inseparability of the original fundament and the phenomenal world constitutes the definitive non-duality.

Similarly, when we state that the true nature of all things is emptiness, it should be understood in the same three ways. On the one hand, in the sense that all entities of the phenomenal world, due to being impermanent and relative, are completely insubstantial and empty of any independent reality. On the other, in the sense that the underlying basis which is the origin of everything is absolutely unconditioned and devoid of any trace of differentiation. Thirdly, it can also refer to the ultimate non-duality of these two realms, superficial and underlying, an integral experience of unlimited openness and ineffable clarity.

As we will see later, these three statements about the single reality can be checked experientially through the respective three basic types of *samadhi* or contemplative states of the Hindu tradition: *savikalpa* or the state with differences, *nirvikalpa* or the state without differences, and *sahaja* or the natural state.

Any theoretical classification concerning reality as a whole is largely a simple mental artifice that attempts to objectively embrace the incomprehensible. In this respect, the three aforementioned realms of interpretation of the term the Void can be seen to imply one other and hence go beyond the boundaries of our conceptual schema. However, we believe that this threefold theoretical differentiation can be useful in principle to avoid some confusion. We shall hence outline the characteristics of each of these realms separately: the superficial or differentiated Void, the underlying or undifferentiated Void, and the all-encompassing or integral Void.

### Regarding the superficial Void.

An ingenuous view of reality can make us believe that the world is a scattered collection of substantial, lasting, independent objects. If we look more rigorously, however, we discover that it is an intricate fabric of deeply dependent, impermanent, insubstantial and, hence, empty or non-dual phenomena.

The new science describes nature as an indivisible totality of interconnected events, as a unified network of dynamic and creative relationships, as a continuum in which there are not really separate parts. The universe is, thus, beginning to be understood as a single, immense, seamless fabric in which it is impossible to isolate a part of the fabric without all the edges tearing and fraying.

Asserting that reality is one and seamless does not mean at all that everything reduces to an invisible cosmic mush or that differentiated events do not exist. As is often pointed out, “seamless” does not mean “without distinctive features”, as we are not talking about impalpable substance, but about our concrete, everyday world. The crux of the idea is that there are no truly independent things in the phenomenal universe, because the fragmentation of the world is a mere fiction produced by our thinking. In the real world, the borders join the very things they separate. Hence, the territory as a whole transcends these boundaries, but does not eliminate them, and integrates all differentiated phenomena, without destroying them.

The only true atom is thus the universe as a whole, a seamless totality that underlies and includes all multiplicity. It is not a unit built of scattered pieces, but an organic whole that truly lacks independent parties. All existences thus constitute one and the same body that connects all nature. Nothing is an island. There are no limits. Every border is illusory. Life is indivisible.

As no form in the universe is actually separable from the rest, the life of any entity, far from being a mere fragment, in fact embraces the integral totality of existence. In this regard, we could say that the soul of each and every organism is the complete network of relationships of the cosmos as a whole. Each individual can thus be conceived as a focal point through which the entire universe manifests itself. Each and every individual is an expression of the same single integral reality, experienced from different perspectives, in different places and at different times. Each and every individual reflects a particular action of this totality of the world that reveals its infinite dance in every corner of itself.

The new science understands that isolated elementary particles are mere abstractions, as their properties are only observable and definable through interaction with other systems. In fact, particles have no independent existence, as they are essentially just a set of relationships that extend to other things. Therefore, researchers are facing a new notion of the universe as an indissoluble totality that transcends the classical idea of a world of separate, independent objects.

Thus, in the bootstrap approach, reality is considered to be a dynamic web of interrelated phenomena in which no part is considered to be fundamental, but rather each part is seen as a result of the action of all other parts. It is the overall coherence of these correlations that determines the structure of the totality of the fabric. According to this approach, the universe is like an immense organism in which each event arises spontaneously from the infinite network of causal relationships it comprises. There are, therefore, no simple causes or isolated effects; rather, everything that happens at each point in the universe is caused by everything else. What happens anywhere affects what happens elsewhere. Each phenomenon is involved in determining the events in each and every corner of the cosmos.

All this has a lot to do with the holographic model that we discussed previously. In this model, let us recall, it is argued that each fragment cannot be considered separately from the rest, as, in fact, it contains the totality of existence enfolded within it, which it expresses dynamically from moment to moment. Everything

is contained within everything. Each part envelops the whole. The entire cosmic web of relationships is present in each of its places and moments, and determines the behaviour of each particular event.

One of the key points on the Buddhist tradition rests to affirm the emptiness of the phenomenal world is precisely the interdependent origin or conditioned arising of all things. It thus upholds the radical relativity of existence: all entities are relative, because they can only exist in interaction with everything else. No phenomenon is independent, unconditioned or self-generated; all derive their nature from mutual dependence. Strictly speaking, there is, therefore, no individual separate existence; hence, it is said that all entities are empty of independent reality. Nothing exists "in itself", but only in the context and dependent on everything else. Nothing is real outside this relative, interdependent existence.

The *Mahayana* school postulates an organic and relational view of the universe. Followers of this tradition compare it to a multidimensional network of crystals, within which each contains the reflections of all the others, to infinity. Everything is woven in the play of unlimited mutual relationships. All in one and one in all. Unity in diversity and diversity in unity. Each and every thing simultaneously includes all others. Each part of reality is built by everything else and, in fact, is a localized expression of one and the same whole.

Each existence is a simple, momentary actualization of the entire set of interdependent causes that make up the universe. No phenomenon can be attributed any particular cause, because, in actual fact, it is engendered by everything and, in turn, affects everything. Each event has a myriad causes and produces countless effects. The entire universe contributes to the existence of the smallest of its parts, so that nothing could be as it is if the universe were not as it is. Each object is thus a manifestation of the unity of everything.

As everything is made up of everything else, nothing can be just by itself. Things in particular do not have their own, stable identity *per se*; they always exist as a function of and in dynamic relationship to everything else. Each thing arises and consists of that overall web of mutual conditional dependencies that is constantly changing. All beings are thus no other than a set of transient, ephemeral, unstable properties, caused by a host of interrelated factors.

Another of the key tenets of the Buddhist tradition sustaining the empty character of empirical reality is precisely this transitory nature of all existence. The entire relative world, both outer and inner, is in constant flux. All life is a conditioned process of cause and effect, an incessant flow of physical and mental energies that perpetually spring up and fade away. The only thing that can be said to exist is this universal flow of energy, this endless stream of physical and mental processes which mutually condition one another.

Particles are never the same at any moment. Everything dies and is reborn endlessly at the phenomenal level. It is the human intellect that, closing its eyes to the succession of events, creates the illusion of permanent objects where only fleeting processes exist. The rapid, uninterrupted course of successive events produces the erroneous appearance of continuity where everything is incessant flux. Nothing is stable. Nothing endures. The entire manifest world is immersed in this perpetual play of birth and death, in the ongoing dynamics of transformation and change.

All elements of the mind and body exist only for a moment, continually arising and fading away. Everything is transitory. Nothing stays the same for two consecutive moments of existence. In each now of life, everything dies to a past that no longer exists and is born to a future to come. The whole world is renewed moment by moment in an endless chain. The whole truth of Nature consists of this ceaseless process of creation and destruction, of emergence and dissolution, moment by moment.

In all forms of becoming, there is nothing permanent to hold onto. This impermanence is hence painful for those who intend to hold onto something stable and durable, but appears as joyous creativity for those that

flow with the current of life. Without the death of the old, the emergence of the novelties that characterize the evolutionary process of the universe could not take place.

Nothing that is perceived in the phenomenal world is static. Everything is a torrent of forms in constant flux. What we call things or objects are mere appearances, relatively stable in the overall flow of energy and consciousness. Like in whirlpools in water or cyclones in the air, there is nothing we can call them substantial or solid. The relative world is a web of ever-changing events, totally devoid of permanent essence. There is no constant core to count on, as reality is always new, always fresh, perpetually arising and fading away in every present moment.

This lack of inherent existence in all the realities of the manifest world is the third basic tenet of the Buddhist tradition to assert the emptiness of the universe. This tradition argues that there is only a flow of fleeting phenomena and that this process is, in fact, empty. However, empty here does not mean the lack of something, but mere impermanence and insubstantiality. Affirming the emptiness of all things thus does not mean that they do not exist, but that they are merely transitory appearances, ephemeral events, not lasting substances. Like the momentary reality of waves, which soon merge with the ocean that produced them.

There is no solid core that remains separate from the changing flow of the universe. In the phenomenal world, there is no immutable entity behind the fleeting events of becoming. Like a flame that burns in any one instant has nothing to do with the one that shone in the preceding moment, no unchanging self or permanent ego exists in the relative realm. Fire, which dies the moment it is born, is thus a faithful expression of the non-substantiality of the manifest world.

No matter how much one looks, one will never find a self-existent character, hidden within organisms, that is independent of the totality of the flux of reality. The idea of an unconditioned entity acting autonomously, separate from phenomena, is reminiscent of the old animist approach that assumed the existence of a rainmaker, beyond the clouds, emptying buckets of water onto the earth. But there is no immutable character hidden backstage. All phenomena are empty of a personal entity that dwells within them. In the relative world, everything boils down to a perpetual flow of events, without someone in the background who makes it all happen. The stream of experience that is renewed every moment refers back to no ego or self. What happens is a pure arising and fading away, moment by moment, with anyone arising or fading away behind this process.

Egos are simple fleeting manifestations of collective conditioning, momentary actualizations of the totality of interdependent causes that make up the universe, not substantial individuals removed from cosmic dynamics. Like modern positivists, Buddhists believe that individuality is no more than a compound of transient, ephemeral and unstable properties, the product of countless interrelated factors. From this perspective, the ego is a pure illusion created by the combination of physical and mental processes that are in a state of constant flux. It is the persistence of these fluxes that creates in the mind the false notion of a lasting entity, but, in fact, its continuity is as illusory as that seen in films, following the mere succession of static images.

In the relative world, everything is a continuous birth and death of existences. Yet, to say that all things are in constant flux does not mean at all the denial of the stability of what is not a “thing”. For although all forms of the universe are arising and fading away from moment to moment, in a broader sense, nothing ever changes, as the sum of the energies is always the same. Notions like appearing and disappearing can be applied to individual waves, but the ocean water is free of such distinctions. Like absolute potentiality, which neither exists nor ceases to exist. Ultimately, destruction is only appearance. There is only a change of forms and the evolution of qualities. Nothing is created or lost. Nothing is permanent or is annihilated. Everything is transformed. The manifestation of energy and consciousness changes. Existence itself is ungraspable.

Some traditions emphasize the non-reality of the ego, while others insist on the unity of the universal field. These are two ways to suggest the same experience, since stating that there is no separate entity from the total flux is the same as stating that the ultimate identity of all beings is one and the same everything. Thus, the self can be understood, indistinctively, as the integral stream of events or as the nothing in which these events flow. To be one with all things is identical to not being something in particular.

### Regarding the underlying Void.

We previously stated that if apparent dualities are, in fact, absolutely inseparable and interdependent, everything seems to point to a common non-dual fundament that transcends and embraces all these opposites. Using the language employed in previous chapters, this primordial state may be considered as an undifferentiated “prior” reality to the polarization of the aspects of energy and consciousness, outer and inner, object and subject. It is this first apparent “dualization” of the non-dual basis that gives rise to the progressive manifestation and unfolding of its infinite potentiality in the phenomenal universe. Recall that these poles of energy and consciousness are precisely the original source and the final abyss of all macro- and microcosmic flux.

We can thus intuit the underlying Void as the fundament or essence of all events, as the source and ultimate support of all existence, as the pure, undifferentiated, formless matrix from which all things emerge. Mystics and scientists designate this fundamental level as empty, because it is devoid of any qualification or particular determination. It holds no specific characteristic, specific appearance or distinguishing feature. But it is not a mere absence or outright negation. It is, rather, a state of infinite presence, beyond space and time, beyond any attribute or condition, beyond any distinction or differentiation. An unlimited, omnipresent and indestructible opening which “enables” the entire universe of finitude. A diaphanous, lucid and luminous field that sustains and embraces the entire world of particularities. An infinite and boundless, eternally self-evident spaciousness, from which arises, in which exist and to which return all temporary phenomena.

The new science contemplates with amazement the vertiginous and permanent dance of creation and destruction of particles and antiparticles that appear and disappear, at every moment, in the enigmatic quantum void. So-called elementary particles are no more, in fact, than excited states of the fathomless void. The entire world of matter thus turns out to be just a small, fleeting ripple on the surface of a deep, invisible ocean of infinite virtual energy, which is the source of everything and the sink into which everything drains.

Like a nothing that unfolds in simultaneous positive and negative quantities, this boundless abyss generates all the pairs of opposites of the relative world, which, ultimately, are no more than impermanent forms, transient manifestations of that nothing. It thus seems as if we were made of a diaphanous, unimaginable emptiness or Void that could only be detected through the apparent cracks that dualities produce in its transparent matrix.

In the words of a quantum physicist: “All matter originates in an imperceptible substrate. In a sense, it resembles an immaterial, undetectable and omnipresent emptiness, a very peculiar form of ‘nothing’ from which all matter derives.” In the new physics, the boundaries between ‘something’ and ‘nothing’ thus become diffuse. Everything, absolutely everything, is formed of emptiness. Far from being constituted by a permanent solid substance, so-called material objects are no more, in fact, than mere eddies or dynamic patterns of a dancing flux of energy, which is born and dies in the underlying fundamental void.

Similarly, spiritual traditions speak metaphorically of eternal nothingness, the bottomless abyss, the primeval well, the formless fundament, the primordial indistinction, the infinite void. When you see God, they say, you will not see anything, because reality without limits is no-thing. As it lacks limiting dualities,

the ultimate basis of everything is neither definable nor in any way thinkable. Thought cannot compare it to anything, because there is nothing outside of it to serve as comparison. As it is impossible to separate oneself from to examine it from the outside and turn it into an object of knowledge, it is absurd to attempt to describe it. It would be like a knife trying to cut itself. Hence, the negative language of metaphysics simply attempts to show that words and ideas are incapable of embracing the absolute. Negating all finite and dual approaches, it points to what is free from constraints and highlights the infinite, non-dual nature of reality. Absolute negation is thus simultaneously absolute affirmation.

Although the underlying Void resists any description or objective image, it should not be confused in any case whatsoever with a transparent substance, of which all things are made. Nor should it be understood as a pure nothingness into which all phenomenal entities fade forever. It is not a superstructure that soars over the phenomenal universe, or an extrinsic substrate on which it rests, but rather the most intrinsic constitutive principle of all things. It is not something apart from the world of forms, but the sameness of all forms. It transcends apparent opposites, but yet is not, in any way, outside of them. It is, in short, the true common nature of all things, the nurturing space of all phenomena in the world.

When we put forward the fundamental emptiness of the universe, we are thus not invoking a nihilistic criterion. To the contrary, we are referring to a reality without boundaries or seams that cannot be classified under the categories of our dualistic logic. The Buddhist tradition itself speaks explicitly of something neither born, nor made, nor created, nor formed. It thus proposes a non-phenomenal state that is beyond our partial, relative experiences; one that is hence incomprehensible to the limitations of our intellect. Here, the term emptiness does not have the least negative or pessimistic inflection and, in fact, is entirely comparable to the concept of wholeness.

A reality without boundaries or particularities can be indistinctly designated either as empty or full. Given that underlying reality transcends and includes all phenomenal manifestation, it can simultaneously be considered negative, in the sense that it is beyond all that is finite and conditioned, or positive, insofar as it sustains and embraces all existence within itself. It lacks nothing and has nothing in excess. Nothing can be added to or taken away from it. It is the totality of existence, as there is nothing outside its scope. One might say it is infinite plenitude. However, given that in speaking of “plenitude”, one might think of a substance contained within certain limits, some traditions have chosen to use the term “emptiness” to refer to this insubstantial fundament that lacks objective content –i.e. separate from the subject contemplating it– and has no boundaries defining it. Expressions that integrate both concepts are also sometimes employed; thus, it is said that “emptiness is no but the most perfect and ineffable plenitude” or that “supreme plenitude has an empty appearance and is inexhaustible”.

The reality that sustains all phenomena is beyond all forms and does not admit any description whatsoever. It is, in fact, “no thing”. That is why it is called the empty state. Yet it is not an inert, sterile zero, but rather contains the potentiality of all phenomena of the particular world. It is fundamentally the true nature of all existence. Hence, it is also called the state of plenitude. It is, in fact, “all things”. Whoever finds it, finds nothing and everything.

The underlying Void is a state where you cannot perceive anything specific, but it is pregnant with all that exists. In its absolute simplicity, it is truly all-powerful; as it can contain everything, embrace all possibilities and dispose of infinite options. It is precisely from the indeterminate that anything can evolve. Where there is nothing, there is room for everything. Therefore, is not merely an impotent nothing, but, on the contrary, as it is not something in particular, it can make all things from itself, remaining within its innermost core as eternal emptiness. It is, in fact, infinite potentiality. No attribute may reflect the endless versatility of this boundless abyss that generates, sustains and embraces all the world’s polarities, but which is neither defined nor consumed in any of its manifestations. Thus, it is like nothingness with respect to all things, as none of them can ever comprehend or fill it.

The centre of the world is, in itself, empty, but a creative void from which all the temporal lines of the cosmos arise and to which they all tend. It is the supreme state of origin; yet, at the same time, it is the central element in the evolutionary mechanism of the universe. It is not something vague and non-existent, but a highly dynamic, active factor. Being nothing, it is the origin of everything. Being empty, it constitutes the inexhaustible, pristine source from which all existence flows. The entire phenomenal world is the unfolding of this deep abyss, which, despite everything, remains immaculate, transparent and free from self-identification with anything. All things come from it, are in it and return to it. Yet behind these fleeting forms, it remains unchanged in its timeless stillness, now, at the beginning and forever. Beyond change. Beyond birth and death. Always present in its infinite play of dual appearances.

The underlying Void is the essential nature or original state of all things. Our real home is where there is no subject that sees nor object seen, as this underlying reality lacks the slightest trace of separation or duality. All forms of existence share the same fundament and are hence essentially identical. The true nature of different beings is not a particular entity owned exclusively by each one that makes it different from others, but rather a diaphanous essence common to all; an essence beyond our dualistic concepts of unity and multiplicity. Eternally empty and clear. The simple, ever-present self-evidence that we truly are.

### Regarding the integral Void.

In the previous two chapters, we pointed out the empty nature of both the phenomenal world –due to its indivisibility, interdependence, impermanence and insubstantiality– and its original matrix –due to its limitlessness, indeterminacy, non-differentiation and ineffability. What we shall now denominate the integral Void is no more than the non-duality of these two empty realms, superficial and underlying, in a definitive, all-encompassing experience, which constitutes the major finding of non-dualistic traditions.

We insist here on the experiential aspect of this point, as it is not so much a theoretical description of something that can be experienced objectively, from the outside, by an external subject, but an approach to ever-present self-evidence, which is revealed by transcending any type of exclusive identification, whether with some aspect of superficial appearance or the entirety of the underlying fundament.

In this regard, the wonderful poem *Xing Xing Ming* –attributed to the third *Chan* patriarch Sengcan– advised: “Pursue not the outer entanglements, Dwell not in the inner void.” Because true awakening consists in contemplating the infinite in the finite and the finite in the infinite, thus transcending both the void and forms. With the realization of integral non-duality, one simultaneously embraces the conventional truth of the relative world and the ultimate truth of the underlying Void. One thus discovers, without a shadow of doubt, that this very same everyday, impermanent and painful world is no different from the unconditional and supreme state.

In the non-dualistic view, nothing is extraneous. The divine does not exist outside of the material world. The Absolute and relativity are not two. The eternal and the ephemeral are not separate. The immutable Void does not exclude impermanent forms nor does it appear apart from them. Unity is not opposed to multiplicity, nor does simplicity deny complexity. The one-without-second transcends and embraces all opposites. It is simultaneously container and content. In fact, all the processes of the universe are produced, housed and finally absorbed by the all-embracing primordial void. All forms of existence are thus but fleeting condensations, apparent costumes of this indescribable empty wholeness. So, as relativistic physics believes that space contains not only matter, but rather that it constitutes it –it is said that gravity is none other than the “curvature” of the spatial-temporal fabric–, non-dualistic traditions claim that the void *is*, rather than *contains*, all things.

The manifest and the unmanifest (or superficial and underlying) realms that we have discussed in the two preceding chapters are not actually two different realities, just as, for example, water and waves are not.

Waves do not have to stop being so to become water, nor does water have to become nothing to form waves. The same applies to clay and pots, or gold and jewels, to name two of the most widely-used similes in this respect.

Although all these analogies are certainly suggestive, we would like to warn of a possible error in their interpretation. Let us recall that, according to our scheme, in the empty fundament energy and consciousness are absolutely undifferentiated and hence constitute a single reality, while in their manifestation both aspects are polarized as the base and summit, the origin and the goal, of any time-based pathway. In the aforementioned analogies, however, it might seem that fundamental reality is assimilated only with the material or energy base, and that the formal, or conscious, aspect is considered as something extraneous or secondary. In our proposal, however, we insist that primordial reality is non-dual energy-consciousness and hence in its apparent unfolding it not only manifests as the energy aspect that sustains and constitutes any phenomenal existence, but also as the conscious appearance that understands and provides form.

It seems important to clarify this point because, from perspectives considered spiritual, the evolutionary side of life is sometimes belittled, as they state, if everything is gold, what importance does the form of the jewels have? In our view, however, it is precisely the development of the complexity of forms that defines the emergence of the facet of consciousness and this should reach the limit of its unfolding to discover its non-dual identity with the aspect of energy, already present since the origin. That is, far from being an insignificant or accessory phenomenon, the evolution of forms is the central fact that will reveal the identity of the phenomenal universe and the fundamental emptiness.

An analogy that might be more fitting to what we are trying to explain in this chapter would be to equate the underlying Void with the number zero (0) and assimilate the dualities that make up the phenomenal world with the set of pairs of opposite numbers: one and minus one (+1 and -1), two and minus two (+2 and -2), etc. Zero, here, would not be a sterile nothing, but a primal womb capable of generating all the antagonisms of the universe. No matter how many other pairs of positive and negative numbers are created—and even though they are subsequently divided or subdivided or integrated or merged and dissolved—the sum total of these dualities will always have the value zero, identical to its original matrix. It not that in the beginning it was zero and in the end it will be so again, but that, at all times, it has inexorably not ceased to have that value. We can say, in this respect, that the changing universe of dualistic forms is, as it appears in every moment, identical to the formless, immutable emptiness of the origin.

The underlying Void is therefore not something separate or different from, or hidden behind the relative world, but precisely its true nature at all times. Strictly speaking, it is not correct to state that the primordial void *lies* at the bottom of existence, or that it *underlies* phenomena, because, in fact, it is not something that is outside the relative world, but is strictly one with it. The hereafter is in the here and now. Emptiness is not something apart from the world of forms, but the sameness of all forms. The absolute is the very reality of appearances, the unconditioned is the true face of the conditioned, *Brahman* is the true identity of the universe.

The ultimate duality to overcome is precisely the one that might arise between the non-duality of the underlying Void and the apparent duality of the manifest world. The genuine non-dualistic perspective recognizes the simultaneous presence of the two spheres of reality, the absolute and the relative, and unifies them dynamically. It therefore does not posit two independent realities, one underlying and the other superficial, or a monistic mush of both, but a single organic whole with two different, static and mobile, unchanging and changing aspects in a circular spontaneous play of endless creativity. Integral reality thus belongs neither to the category of being or to that of nonbeing, because, as stated in idealist philosophy, neither pure being nor pure nothing is true, but rather the union of both in a permanent flux in which each disappears immediately into other. In the words of a medieval Kabbalist, "Being is in the nothing in the form of nothing, and nothing is in the being in the form of being. Nothing is being and being is nothing."

The finding of this non-dualistic approach, as we shall see later, reveals in a revolutionary way that it is not necessary to remove temporality to encounter the immutable, that the other world is to be found nowhere else than in every here and now of this universe, that “as it is, whole and complete, this world of the senses is enlightenment”. Ultimate reality is, from the beginning, structurally inseparable from empirical reality. There is absolutely nothing in the manifest world that is exterior to or beyond its unmanifest fundament. It thus no longer makes sense to scorn the phenomenal universe as lacking in value or seek eternal emptiness apart from fleeting forms. For, as we state, far from being a reality outside the world of forms, the absolute is at all times their true nature. Each now in time is, in fact, but a finite manifestation of the timeless present of the infinite plenitude of emptiness. Hence, to identify uniquely with a certain partial aspect and resist the integrity of the present situation is to establish an apparent duality, “to create a second”, thereby obscuring the self-evidence of the empty wholeness, or whole emptiness, which is now and always now forever.

The integral Void is nothing more than a presence free of any identification with particular phenomena, limitless purity in which experiences come and go, a transparent opening in which all forms appear and disappear. Everything is in constant flux, but the opening itself never enters or leaves the stream of time. In the world of becoming, everything has a finite duration, but there is something that is never born nor dies: full and immediate energy-consciousness, the simple feeling of being, the crystal-clear self-evidence of which all experiences are mere fleeting reflections.

To experience this integral Void means not being established anywhere, nor having a place to lay one’s head. It is simple lucidity without a centre or periphery, where everything happens spontaneously. It is unlimited acceptance of present circumstances, a total opening that allows the sun to rise over the good and the bad, and the rain to fall on the just and the unjust. It is pure transparency in which all the forms of the world’s panorama flow. It is absolutely nothing and yet everything. The clouds come and go in the sky, and you are the sky and clouds. Now and always.

### **Between the one and the many.**

We have just pointed out three possible meanings of the terms “emptiness” or “non-duality”, which we have called superficial (differentiated), underlying (undifferentiated), and integral (all-embracing). In the following sections, we shall delve deeper into this third facet –the integral Void– that reveals the non-dual character of the original fundament and of the phenomenal world. We shall show how our evolutionary approach points strongly towards the dynamic identification of these two apparent aspects of reality.

Relying on many occasions on the definitive experience of non-duality between the superficial and underlying spheres of reality, humans have tried to rationally express the characteristics and way of integrating these two seemingly incongruent worlds: the one and the many, being and becoming, noumenon and phenomena, emptiness and forms. Different philosophical and spiritual traditions have developed proposals that point decisively towards non-duality. Let us see the broad outlines of these approaches.

The central concept in all non-dualistic philosophy revolves around the idea that the unmanifest underlying reality is not disconnected from its superficial manifestations. There is no creator separate from creation. Or, if you prefer, the creator and creation are not two. Creation split from its origin is not possible, because there can be nothing outside of the absolute. The primordial reality has thus not created a world external to itself, but has manifested itself as a world in itself. The relative universe is not something external to the absolute, but rather simply a network of relationships among a host of varied self-projections of this absolute in its own infinite emptiness. What in some traditions is called creator and creation are, according to the non-dualistic standpoint, but two aspects of one organic whole in its self-creating dynamics. The creator would this single being in its fundamental undifferentiated state of energy-consciousness, while

creation would be this same being in its state of millions of reflected forms according to different balances of energy and consciousness. In short, the self-creating dynamics would consist in a recurring emergence and dissolution of manifest aspects from and to its immutable base, through which the omnipotence of the origin would progressively be realized.

Many traditions state that unity is the eternal and fundamental fact, and that multiplicity is only the varied self-expression of said unity. According to this viewpoint, truth is always the one, who, reflecting on itself, playing with itself, unfolds its infinite potential in a wide variety of forms. Like a multifaceted crystal that shows a rich plurality of images of one and the same object without it actually being multiplied. The multiplicity of beings is hence mere appearance, as, in fact, they are all just different aspects of the one being. Not that the one becomes many, creating a dichotomy between the two realms, but rather it is always the same single unity which manifests itself as multiple, without ceasing to be one single unity in the process. Hence, when it is said that all things are one, it is not only because all things come from unity and return to it, but because they are one now and forever.

The universe is not a multiple reality of separate beings, but the manifestation in space and time, in plurality and change, of that single one that does not change. There is no multitude, just one. This one, however, although truly indivisible, manifests as if it were divided into countless individuals, taking different forms in the different beings of the world. Just as the same sun shines through countless windows anywhere on earth, a single shining being is reflected in all creatures in the universe. It is the same, single empty wholeness that dwells in the multiplicity of its dwellings, in all and in part, in the entire cosmos and in each being.

The single, eternally self-existent being manifests in itself the plurality of the universe. How could it do otherwise if there is nothing outside of it? Multiple reality is thus a relative world, a web of relationships and interrelationships within the indivisible absolute unity. The relationships of multiplicity thus remain in the all-embracing unity that instigates, constitutes and reabsorbs them. Everything is, at one and the same time, one and many, absolute and relative. As stated in integral yoga, reality is not a mathematical unity with multiplicity as an illusion, but an infinite unity with infinite multiplicity comprised in unity. In fact, the ultimate truth lies beyond these distinctions of unity and plurality, which are no other than human ways of interpreting experiences. Nevertheless, it is acceptably valid to state that the absolute is simultaneously one and the countless many of the worlds, the unique essence of things and the endless forms of the universal process. It is an identity-in-difference or a difference-in-identity between the infinite and the finite, between the one and the many, between being and becoming.

Unity is the base. Unity constitutes multiplicity. But multiplicity does not constitute unity. Water can form waves or be calm, but waves, in contrast, need water to arise. In any case, both aspects are real. Unity with an absolute, eternal and inclusive reality, and the many with a relative, fleeting and dependent reality. Diversity can only be understood as false when it is considered removed from the fundamental unity that constitutes it. In that case, when the consciousness of multiplicity is separated from its own essential unity, the perspective becomes deeply flawed and misleading. An illusory understanding of the world hence arises which breaks up the unity of the absolute into a multitude of disjointed, rootless beings. Understood jointly, however, unity gives meaning to the many, and the many shape unity. Without unity, multiplicity would not even exist, and without multiplicity, unity would be a mere amorphous, sterile void. Exclusive monism would be rigid and overwhelming; exclusive pluralism would be unstable and divisive; only the integration of both allows the creative play of life.

Unity is experienced from undifferentiated consciousness. Multiplicity is perceived from differentiated consciousness. Finally, integral consciousness recognizes unity in multiplicity, i.e. it reveals the amazing, unique identity of infinite diversity. Simultaneously encompassing the unity of underlying consciousness and the many of superficial consciousness, harmonization between the two perspectives occurs

spontaneously and imperceptibly. The radical non-duality of whole emptiness and the phenomenal world is then evidently understood.

Integral reality is both stable and mobile. Being and becoming are two simultaneous aspects of the single absolute. Or, to put it another way, being is the fundamental reality and becoming is derived reality. Nonetheless, it is always the same being that becomes all the existences of the universe, a being which is variously located in its own relative movement of energy and consciousness. However, the process of becoming does not affect the eternal immutability of being in any way whatsoever. Being manifests as a perpetual becoming and, in turn, becoming is resolved in an eternal being. The entire world is therefore eternal and temporal at one and the same time, identical existence to itself and ceaseless transformation. According to one point of view, nothing is, because everything is constantly changing, while from another perspective, everything is, because the same being constitutes the ultimate identity of all things. There exists an inseparable unity of the eternal and the contingent. We evolve and yet are immutable. Being and becoming are true and both are the same thing. There is change and exchange within a constant whole. The goal is the path. The path is the goal.

### **The Void and forms.**

The unmanifest and the manifest, noumenon and phenomenon, absolute and relative, are neither different nor separated. All phenomenal existences are projections or reflections of the single noumenal reality itself, through which it reveals and manifests this original, ineffable and unfigurable abyss. Before the appearance of the world, the absolute was a hidden treasure. As an eye is unable to see itself, the primordial void was unable to contemplate itself. The unmanifest needed to differentiate itself, or at least simulate doing so, to perceive itself to some extent, even as a reflected shadow. It needed to unfold and make what was in fact eternal and invariably one appear as two: eye and mirror, consciousness and energy. The reflected image was not the thing itself, but in what other way could it perceive itself? So, let us say, it self-projected itself in every corner of its empty wholeness, and identified itself with limited aspects of itself to look at itself in infinite ways. The entire universe is thus the huge mirror in which the absolute contemplates itself bit-by-bit, self-revelation in time and space of the eternally imperceptible. While all beings and things are only fleeting symbols of the underlying Void, ephemeral reflections of intimate nothingness, the apparent faces of the eternal unknown.

The moon is reflected wherever a water surface exists. We can see its image in any pond in the world. Yet if we try to remove it from the liquid, it will be impossible to do so. In the phenomenal world, it is not possible to catch the thing itself, that intimate, underlying, unknowable reality. Therefore, when the eternally present void attempts to capture itself, from moment to moment, in the relative world, it returns over and over again to its origin without managing to do so. And it tirelessly tries over and over again at the following moment. Let us recall the recurrent evolutionary dynamics we have proposed between the original and final voids of energy and consciousness, and how the entire universe emerges within this circular, eternal dynamics of the yearning of the void for itself. As no form is able to fully reflect the formless plenitude or wholeness of the underlying Void, successive attempts to do so creatively unfold over time, namely the entire cosmic evolutionary process. Wholeness is thus the eternal play of nothingness. An eternal dance of love between the timeless void and its fleeting forms, which engenders, sustains and reflects the world in every now in time.

Reality as a whole constitutes a spontaneous dynamism through which the unperceivable can –somehow– be glimpsed. It is a creative movement of unfolding and refolding that the primordial abyss generates in itself for its self-contemplation in countless beings. It is an instantaneous and eternal distanceless journey, from identity to difference, without ever leaving itself, in which the Void reveals itself in an evolutionary manner in the universe. It is an eternal birth from the ineffable empty womb, which manifests its infinite potentiality in the fascinating play of forms of the world.

The *Tao* produces all beings, but remains unchanged in its eternal stillness. It is the source from which all things spring, and yet, deep down it remains eternally immutable. It is an emptiness that cannot be filled and hence inexhaustible in its action. It is an eternal nothingness that produces an eternal beginning. Despite this perpetual movement that generates finite forms, the original empty wholeness remains inextinguishable. The source never dries up nor does it become weakened, because all the phenomenal flux does not occur in an impossible outside, but in the source itself. It is a simple play of relative relationships in the diaphanous, immaculate space of the absolute.

All mystical traditions place great emphasis on the dynamic unity of the Void and the forms it generates. Both are facets of a single integral reality. The new science is also beginning to understand that the conjunction of generative emptiness and phenomenal forms is the key to the astonishing self-organizing universe. The visible world of energy and consciousness evolves, it is said, thanks to a unified interactive dynamics between these two realms of reality. The cosmos is thus cyclically structured via this circular play between the quantum void, or basic level, and the spatiotemporal world, or derived level. In this way, we arrive at a complex organic conception, which highlights the unity of this duality and the duality of this unity. The need even arises of speaking of uni-duality within the process of self-organization, which, of course, is completely in line with the proposals of non-dual traditions.

The Void is the source and receptacle of all the events of the universe, the infinitely fertile womb from which all creatures are born and to which all return. The world of forms is nothing but the sparkling spectacle that arises from nothingness and returns to nothingness, the magical reflection of the pure, undifferentiated non-substance of the deep abyss. Non-duality includes both aspects: ocean and waves, stillness and movement, eternity and time. Integral reality simultaneously encompasses the immutable Void and its fleeting forms. As Ramakrishna stated, "You cannot realize the Absolute without participating in the dance of the relative. You cannot understand the play of relativity without being immersed in the radiant stillness of the Absolute." The world of forms will not be understood if one does not have the experience of the Void, nor can the Void be discovered without penetrating the world of forms.

Exclusive fixation on the Void leads to destructive sterile dissolution in undifferentiated reality, while the blind clinging to forms leads to unescapable, anguished and illusory self-limitation. For the wheel of the world to rotate, it requires both an immobile hub and a dancing periphery, repose and activity, the silence of emptiness and the sound of forms. The integral reality of the hurricane includes, at one and the same time, the calm of the eye and the movement of the air around it, stillness and dynamism in an inseparable unit. As in the poem *Xin Xin Ming*, "Neither pursue conditioned existence, nor stay in idle emptiness. In oneness and equality, all self-boundaries dissolve." Only by perceiving emptiness and forms simultaneously is it possible to flow harmoniously and creatively in the here and now eternal light in which timelessness and time are unified.

All forms come from the formless Void. Each and every one of the beings in the world is the manifestation of the single undifferentiated totality. What is timeless appears in time as an unending process of birth and death. Life is thus an eternal pirouette between immutable essence and its ephemeral appearances. Hence, phenomenal existences do not have their own reality distinct from the primordial Void, but are only its contingent and mutable expression. The world of forms is not something apart from the Void, but an activity of the Void itself. Form is nothing but emptiness, emptiness is nothing but form. Enlightenment is only the unveiling of this ever-present evidence, that the world of form and formless plenitude are not two. The simple realization that the apparent form of mutable things is no different from their immutable essential emptiness.

The fundamental and unanimous experience of non-dual mystics is this discovery of emptiness in and as all forms of the universe. The temporal world of manifest reality and the timeless world of unmanifest reality are one and the same world. It is not that there exists an intimate relationship between them, but that the two are only one. Waves are not *related* to water; waves *are* water. The 'other' world is 'this' world

experienced in the appropriate way. With enlightenment, it is thus revealed that our central plenitude is absolutely distinct from and absolutely identical to its limited manifestations. That the ordinary and the extraordinary, the natural and the supernatural, are exactly the same. That the world of perfection is no different from our work and rest, weeping and laughing, being born and dying.

The key lies in the simultaneous experience of nothingness and the totality, of the containing emptiness and the endless forms that fill it. True nature is neither existence nor non-existence, but both at the same time. Space lacks qualities and forms have them all; but without space, it would not be possible to see any form, and without forms, space would be eternally unknown. Liberation lies in emptiness, not in forms, but emptiness generates and comprehends the entire flux of images of the universe. That is why non-dualistic traditions invite us to live as the Void, embracing every form, to discover our own identity in that diaphanous and lucid opening, in which all worlds spontaneously arise without end. Each thing is thus the glory of the nothingness that sustains it, a song to the plenitude in which it lives, moves and exists.

### **Samsara is nirvana.**

In Buddhism, *nirvana* and *samsara* are what, until now, we have been calling underlying emptiness and superficial forms. Nirvana is thus reality without form, unmanifest, unconditioned, unborn, unperishable, unchanging. The negative language used to designate it should be understood as a refusal to identify this ultimate reality with any of the things known in the relative domain, though in no case whatsoever does it refer to a state of negativity or a lack of reality. What is denied is its equation with a limited entity belonging to the world of duality. What is thus designated is something beyond phenomenal appearances; i.e., an absolute plenitude incomprehensible to empirical knowing. *Nirvana* "is that noble pearl, which to the world appears nothing, but to the children of wisdom is all things".

In its definitive meaning, *nirvana* is an affirmation that transcends opposites of all kinds. The ultimate duality to overcome is precisely that dividing *nirvana* itself from *samsara*, from the world of contingency and becoming, from the realm of birth and death. The great contribution of the *Mahayana* school fundamentally revolves around this surprising paradox of the non-duality of *nirvana* and *samsara*, of the immutable and the changing, of being and becoming. There is no *nirvana* except where there is *samsara*; there is no *samsara* save where there is *nirvana*. The notions of *samsara* and *nirvana* are interdependent. The supreme truth lies not in one or the other considered in isolation, but in the unity of both, which transcends all opposites. *Samsara* and *nirvana* are thus two dimensions of the same, unique, integral reality, two aspects of the One-without-second. Both must therefore be apprehended jointly.

Our worldly life is an activity of *nirvana* itself. There is not the slightest separation or distinction between them. *Nirvana* is not something from another world; it exists in every here and now of everyday life. It is none other than the true non-dual nature of this changing world of everyday life. It is no other than *samsara* "seen" in reality, when, having transcended all identification with the finite, the veil of ignorance is rent. The same world that presents itself to the unenlightened mind in the form of *samsara* appears before the awakened mind as *nirvana*. Liberation thus consists in simply acquiring awareness of our eternal real condition, not in conquering an alien reality.

"Where is the world of the undying unborn? It is right here, in the world of birth and death." To achieve *nirvana* is not to cross to another shore, but to discover the reality that has no shores. In other words, the other shore has been this same one forever. That is why *nirvana* is not a state to be achieved, because we have been in it right from the beginning. To achieve awakening is not, in fact, to achieve anything, because *nirvana* is invariably here and now. As emptiness is not a realm separate from forms, but the sameness of every form, *nirvana* cannot be found apart from the phenomenal world. *Nirvana* does not come after nor is it beyond *samsara*, but, in the words of Zen master Hakuin, "this very land is the pure lotus, this very body is the Buddha."

The absolute is in the world of the relative, not outside of it. Hence, in Buddhism it is considered deeply erroneous to seek salvation outside of this universe. True *nirvana* can only be revealed when we are liberated not only from identification with the world of impermanence, but even from *nirvana* itself, understood as mere transcendence of the contingent universe. Hence, the awakened man who, because of his wisdom, does not identify with *samsara* because of his compassion for all beings, does not entrench himself either in a transcendent *nirvana*. *Nirvana* is not the goal. The true goal is *nirvana-in-samsara* and *samsara-in-nirvana*, simultaneously, from instant to instant.

We must find perfect existence through imperfect existence. Without respecting, probing and embracing the world of confusion, it will be difficult to discover the awakened state of mind. Because *samsara* is the very form of *nirvana* and hence the only means to unveil it. However, as we shall see, as long as we identify with some particular form and, from that identification, we desire or reject what seems to be alien to us, we will continue to deny integral reality and sadly obscure joyful and eternal self-evidence. If we had a moment of perfect authenticity, we would instantly see that *samsara* and *nirvana* are but one and the same thing.

### **Divinity, God, world.**

We have just outlined the core of the characteristic message of non-dualistic traditions: the superficial and underlying realms of reality are not two, the differentiated and undifferentiated worlds are one world, noumenal and phenomenal realities constitute one and the same reality. From enlightened experience, this apparent paradox is revealed as absolute evidence, while from the rational point of view it is barely conceivable. The key that can help us glimpse the way to integrate these two, at first glance disparate, worlds lies in the archetypal core of what we have previously discussed. We are thus presented with three basic areas of reality: the undifferentiated or fundamental identity, the Trinitarian archetype or dynamic image of the undifferentiated; and the phenomenal universe or holographic reflection –in the macrocosm and microcosm– of the archetype. All the great spiritual traditions refer to these three apparent facets in their descriptions of integral reality. Let us outline some of them. To do so, we will use their respective terminologies, as, although this may complicate its readability a little for the uninitiated reader, we think it is worth focusing the argument in this way, given that the parallels that arise are very suggestive.

In the Christian tradition, and fundamentally through Rhenish mysticism, a clear differentiation between the Divinity and God is established, in a very similar sense to that which we have pointed out here between the immutable underlying Void and the dynamic Trinitarian archetype. The Divinity is designated as the pure Absolute One, the undivided origin of all things, the ineffable abyss in which all distinction is dissipated. It is said to be a silent desert, an abysmal essence, a sea without borders, a superexistent nothingness. So poor, naked and empty as if it were not. So simple and elementary that nothing can be said about it. This Divinity, or exceedingly simple unity, is the ultimate foundation of the Trinitarian God, the common basis of the three divine persons, “prior” –according to the human way of thinking– to their relationships, their distinction and their creative activity. Therefore, unity is said to have its actuality in the Trinity and the Trinity, its power in unity. God, or the Trinity, is thus the first effluvium of the divine essence, in which things are not yet separated. This Trinity is always working in a perpetual “now” and its work consists in a constant begetting of the Son, moment by moment. God generates himself, from himself, in himself, and from this continuous birth come all things, ever new and fresh, in an eternal present. As Heinrich Suso, a pupil of Meister Eckhart, put it, “Are not God and the Godhead one and the same thing? Yes, the same; but the Godhead neither begets nor labours; the one who begets and labours is God.” Although God and the Godhead represent two aspects as different as activity and inactivity, it is necessary to see these two formulations of divine essentiality and Trinitarian differentiation fully harmonized in the human mind, for, ultimately, unity is differentiation and differentiation is unity.

Likewise, in Hindu philosophy the absolute *Brahman* also displays a dual aspect: as *Nirguna*, it constitutes the formless, unmanifest, immutable, detached facet without differentiated attributes of the universe; while

as *Saguna*, it represents the manifest, changing facet with form and differentiated qualities involved in the world of becoming. *Nirguna Brahman* is thus the pure, indefinable Being, the supreme, impersonal principle, the “prior” silence to the creative gesture. *Saguna Brahman* on the other hand, is the first sound of the manifestation which holds universal life within itself, the first apparent limitation of the supreme principle, the divine person or *Ishvara* –which, as in Christianity, also expresses itself as a Trinity–, who creates, sustains and destroys the phenomenal world of names and forms. In *Nirguna Brahman*, all the differences between subject and object are transcended in an experience of unity, whereas in *Saguna Brahman*, these differences between subject and object are integrated into a bi-unity dynamically sustained by the force of love. *Nirguna* and *Saguna* are not two independent realities, one motionless, the other in motion, but a single reality that simultaneously possesses passivity and activity. As Sri Aurobindo stated, the silent and the active *Brahman* are not different, opposing or irreconcilable entities, one denying, the other affirming a cosmic illusion; they are one single *Brahman* in two aspects, positive and negative, and each is necessary for the other. *Saguna*, deprived of its substratum, could not exist. *Nirguna*, without its manifestation, would be confined to the unknowable. The word expresses and reveals what is self-contained in silence.

According to the Buddhist doctrine of the *Trikaya*, Buddha also possesses three bodies: 1) the *Dharmakaya*, or body of essence, is the impersonal and immutable foundation in which all beings are one, the absolute dimension of empty truth without attributes in which ignorance has never entered. It is similar to *Brahman nirguna*, being timeless and unconditioned. 2) The *Sambhogakaya*, the celestial manifestation, the dimension of total bliss or body of beatitude, represents the dynamic aspect, the intrinsic glow of light, the emerging energy beyond space and time. It is similar to the *Saguna Brahman* or *Ishvara*. 3) The *Nirmanakaya*, the emanation, transformation or projection of the former body, is the sphere of crystallization in form, the visible and tangible manifestation in the phenomenal world. These three bodies are integrated as the definitive *Svabhavikakaya*, in which all of them, remaining perfectly differentiated, are only one. This triple reality which we have just “objectively” described can equally be approached “subjectively”. Thus, according to the *Dzogchen* tradition, our original condition of total fulfilment and perfection has these same three aspects: 1) The timeless “essence”, empty like the sky, is revealed as an openness or spaciousness free of all form, which allows the consciousness to harbour any content. 2) Luminous, radiant “nature” is the state of uninterrupted clarity that sustains all mental activities. 3) Compassionate, unhindered “energy” is the quality the mind possesses to manifest itself dynamically in innumerable particular experiences. These three facets, interpenetrating one another, are present as one within the primordial consciousness or *rigpa*.

The same schema is always repeated. The empty abyss is reflected in its primordial image, which, in turn, is reflected in the world of dualities. Above, the eternally stable and immutable One; below, the eternally changing many; in between, the bi-unitary archetype, the abode of the Trinities, the starting point of all differentiation. This intermediate term, the beginning and end of all manifestation, is capable of discovering in the One its hidden riches, and of manifesting them in the many without becoming lost in its differentiations. The eternal present of the archetype thus provides the key to the integration of the timelessness of the underlying Void and the time of its superficial forms. Let us look at this in greater depth.

### **Time, the instant and timelessness.**

The theory of relativity has made it clear that the durations of the processes of the phenomenal world are not absolute values, but depend on the reference system from which the measurements are taken. The greater the speed with which the observer moves, the more these durations will be shortened, and, in case of reaching the speed of light, the durations would be cancelled out. That is to say, the *same* process that might last millions of years for one observer, would be instantaneous for another moving at the speed of light. As the Roman philosopher Boethius put it, “The now that passes produces time, the now that remains produces eternity.”

The temporal perspective of each of the three realms of reality we have discussed previously (the undifferentiated, the archetype and the universe) will logically be different.

Time is the measure of change. As we have seen, there are no “things” in the undifferentiated and hence there is no possibility of change or time. There is, therefore, neither birth nor death there. The undifferentiated is thus immutable and timeless.

In the archetype, in the bi-unitary image of the undifferentiated, the dynamic polarization of energy and consciousness emerges within the global unity, that is, without separation or distance between them. We could thus speak of a present without time, a “now that remains”, or, if one prefers, an instantaneous and eternal process of birth and death. Being born means having no past, and dying means having no future. To state that the archetype is born and dies at every instant therefore suggests the experience of an eternal present, without a before or an after, because time is in fact the illusory son of that instant, its unfolding or apparent breaking down into separate parts. Therefore, we may say that there is truly only one single and eternal now that contains the totality of time and is the womb of all temporal reality.

In the universe, in the manifold and limited reflection of the archetype, this eternal now is projected and identified with successive partial aspects of itself; i.e., with fleeting “passing nows”. While the memories of past nows and the expectations of future ones create the illusion of time. Birth and death, which in the archetype were simultaneous and eternal, are thus apparently separated by a temporal duration. However, the obvious fact is that both memories and expectations are experiences that belong exclusively to the present and hence time is no more than a misleading way of interpreting the relative expression of permanent eternity.

The eternal present has been compared with a torch lit at night, and time with a seemingly continuous circular trajectory drawn by that luminous torch. The solidity of this circle of fire is but a product of our memory, an illusory perception of the facts. Actually, it is only a single point of light shifting from moment to moment. The continuity of the supposed temporal trajectories is merely imaginary. Each moment is independent of the previous and the next, as it springs spontaneously from and towards the all-inclusive source of the eternal present. That is to say, the origin and the end of time exist in the most intimate of each moment of time. We could hence say that any moment is the fullness of time, as it is but a radiant manifestation of all-encompassing timelessness.

At every instant, the omnipresent, eternal now of the archetype collapses into a fleeting, limited now of the universe. At every instant, eternity manifests itself in time, entering through the energy base –alpha– of the evolutionary ladder, focusing on a certain level, and returning to itself via the conscious summit –omega– of that same ladder. (See Figs. 7-A and 7-B). The level of focus of this reflected now progressively reaches higher and higher steps, simultaneously actualizing more and more spheres of the world in order to eventually unite in one instant the total spectrum of the great chain of Being, birth and death in an eternal now, thereby disposing of the deception of time.

Let us state it again: each now of our universe –this very moment in which you are reading this sentence– embraces the totality of time. It is not an instant different from the previous or the next, nor does it form a continuous temporal line with them. Far from it; they all are one and the same eternal present, like the torch in the analogy above, successively identified with different aspects of itself. Each now in time is a fleeting manifestation of the single, unchanging eternity.

### **Regarding the origin.**

According to the ancient accounts of creation, the original reality is a formless void, a dark womb, a deep abyss. “Voidness, stillness, serene placidity, indifference, calmness, silence, inaction are the origin of the

ten thousand beings.” The origin is non-duality, the infinite, the boundless, the undivided, the indefinite, the indeterminate. The origin is there where nothing exists, where opposites coincide, where opposites are identical. It is an immaculate, infinitely symmetrical, self-sufficient realm, prior to any kind of imaginable separation or distinction. Like a clear and diaphanous sky, transparent and open, without circumference or centre. Yet it is not a sterile void, but a void from which all things can arise, a womb that potentially harbours the entire universe. It is what does not exist, but which makes all worlds exist.

According to science, the universe has two kinds of energy: the positive energy of mass, and the negative potential energy of gravity which is joined to that mass. The negative term cancels out the positive, and the set has zero energy. The fact that the universe arises from the Void is therefore not in contradiction with the laws of nature. In the initial condition of the process, there would be nothing more than an ineffable Void, an ocean without spatial or temporal boundaries, devoid of distinctions or dualities. The origin could thus be understood as a spontaneous fluctuation in that Void that unfolds its infinite potentiality in and as all the forms of the phenomenal world.

“In the beginning God created the heavens and the earth”, consciousness and energy, inner and outer, subject and object. From the One arises the dyad. The origin is thus an internal polarization in the limitless emptiness, not the external work of an exterior creator. The whole manifest universe begins its existence when this first distinction appears in the empty, infinite and undifferentiated wholeness. Obviously, we cannot conceive of a temporal reality “prior” to the beginning of time, but rather of an unchanged, and therefore timeless, reality that is immutable both at the origin and at any other instant of becoming. With the initial act of creation, with the emergence of the apparent original separation in the empty fundament, begins an unstoppable process of dual reflections, in successive planes, which gives rise to the entire unfolding of the phenomenal universe. Yet, in the midst of this play of successive polarizations, the primordial Void remains eternally diaphanous, whole and undivided, without internal splits or external creations, impartially embracing within itself the full unfolding of its spontaneous self-reflections.

The Chinese diagram of *Yin* and *Yang* clearly illustrates this polar dynamics within the primordial, undifferentiated womb (*T'ai Chi*), which generates the whole process of cosmic becoming. There must be two to make something happen. A magnetic field cannot exist if it does not simultaneously contain both a positive and negative pole. If the unique Being is not polarized into opposites, the emergence of the world of plurality is not possible. While dualities are fused in its womb, everything is reduced to a pure, formless, infinite abyss, but after the primordial gesture of dualization, an illusory distance is created between the polar aspects of energy and consciousness. Thus begins the creative play of relationships between these interacting antagonists. In the empty and full abyss thus appears an active potential capable of generating the progressively complex levels of order that are observed in the evolutionary universe. All phenomenal existences, passing through the innumerable temporal trajectories that connect both poles, try to reflect the original non-duality in the apparent world of dualities, developing for it, step-by-step, organisms capable of simultaneously integrating both antagonistic facets.

According to the schema we have set out above, the original duality maintains an indissoluble dynamic unity between the two poles. Let us recall, in this respect, the primordial archetype, the Trinitarian God, the *Saguna Brahman*, *Ishvara* the creator, the fundamental sound Aum, the bi-unitary energy-consciousness. This original archetype, which is a unified field of infinite potentiality, by projecting and identifying itself with each part of itself, along the apparent distance separating the two poles, focuses or collapses into different finite equilibria of these polar facets. Beginning always with the most basic levels of very dense energy and very slight consciousness, all the temporal trajectories ascent to higher levels, in which the proportions are reversed. Thus, progressively broader ranges of the spectrum of reality are integrated in this impossible attempt of the empty wholeness to contemplate its invisible face through phenomenal forms.

In any case, all these finite forms originating from the energy base of the spectrum are inexorably oriented toward the summit of consciousness. As Alan Watts stated, no current begins to flow through a cable

without the simultaneous existence of the two antagonistic poles. There would be no starting pole if there were no arrival pole. An exterior is not possible without an interior, nor an object without a subject. The emergence of consciousness in the evolutionary process is not the product of almost impossible chance, but the gradual, natural and spontaneous expression of this eternally present bi-unitary archetype in which dualities are fully unified.

In many mythological cultures, the claim is repeated in one form or another that the world emerges from the sacrificial dismemberment of a divine being, from the fragmentation of a primordial unity, and concludes with the return to the origin, to the paradise where everything was unified in the beginning. From the one arise the many, through a movement of separation in pairs in that original, undifferentiated reality, and the many become the one, as wherever things are born, there they perish. The formless reality of the origin is also to be found at the end of the journey, so that the circle revolves eternally, renewing energies at every turn in its inexhaustible source.

Here we would like to emphasize this dual role of the primordial empty wholeness, as the origin and goal of all the processes of the world. And we do so because some traditions sometimes seem to propose as a final goal of the spiritual journey a simple merging with the undifferentiated, forgetting that this empty womb is not only the destination that unifies everything that is apparently dispersed, but also the source that generates the entire creative process of phenomenal differentiation. If the undifferentiated facet had been the complete reality, the universe would never have arisen. Therefore, it is important not to leave aside this creative facet of the Void, as it undoubtedly manifests an intrinsic basic tendency of integral reality.

In the primordial bi-unitary fundament, the origin and the end, alpha and omega, are dynamically unified in an eternal present. The output and goal of all the apparent temporal trajectories of the phenomenal universe are simultaneous in this Trinitarian centre which engenders, sustains and dissolves all beings from instant to instant. The opposing poles of the evolutionary ladder, i.e., the creative energy of the base and the pure consciousness of the summit, are one non-dual reality in that original archetype. For this reason, the return to the source is paradoxically reached by moving away from it, because, ultimately, it is a question of discovering the unity of both temporal extremes in the intimate experience of each moment on the path.

As we have stated above, each now in time is but a limited reflection of the single, eternal, full and immutable present of the original archetype. This primordial reality is not, therefore, only the alpha and omega of all temporal trajectories, but the sameness of each of the fleeting moments that make up these processes. This bi-unitary base, ever present at each instant of time, is in fact the only reality of the whole creative play of dual appearances that make up the universe. As spiritual traditions assert, everything was created by, in and for the primordial archetype. It is the beginning, the middle and the end of all beings, as everything actually happens in that timeless moment that is both eternal origin and perpetual end of its cosmic manifestation. The origin and the end are now. And now. And now.

### **An integral dynamics.**

As discussed above, a holographic plate stores all the information in each of its parts, so that if it breaks, any one of its fragments contains the original image in full. Although the holographic metaphor seems very suitable to apply to our universe, the truth is that it is too static to describe a permanently changing and creative reality. So instead, physicist David Bohm has proposed a dynamic version which he calls "holomovement".

He poses the existence, at a very deep level, of an intrinsic or "implicate" order that enfolds the totality of the cosmic network of relations, beyond space and time. This total implicate order is projected at every instant in all corners of the manifest or "explicate" order, which, in turn, is introjected once more, at every

instant, into the intrinsic order. This “holomovement”, or continuous unfolding and enfolding between the implicate order and the explicate order, constitutes the basic dynamic phenomenon in which all the events of the manifest universe float. Reality is thus constantly unfolding and enfolding itself at such a rhythm as to appear stable and uniform, but, in fact, there is no really permanent or lasting structure in this flux without divisions or fragmentations of the whole. All the organisms in the world are but fleeting eddies in this endless stream, pure patterns of movement lacking any constant or irreducible substance. There are hence no “things” in the universe, but rather only relatively stable forms in this circular dynamics between the two orders of reality. Moreover, as the totality of time is implicit in the intrinsic order, this temporal totality is to be found enfolded in the most hidden aspect of each instant and hence contains all the information of everything. Each event of the universe is thus a particular expression of the one-in-all that enriches its manifestation, from moment to moment, in this circular flow of endless creativity.

Many spiritual traditions, in full harmony with this approach, state that life is an eternal romance between the infinite and the finite, a permanent dance between the single, formless fundament and its innumerable formal reflections, through which emptiness attempts to unveil its original face in the world of appearances. At every moment, the underlying reality unfolds in its superficial manifestations, and, at that same moment, everything returns to the unmanifest base. Existence is thus a permanent arising and dissolving, leaving and returning, being born and dying. Everything fluctuates ceaselessly to and from the empty wholeness in an inexhaustible whirl, plunging endlessly into the infinite abyss and ceaselessly returning to the world of forms. The supreme reality comprehends and unifies both movements, remaining forever immutable.

According to our proposal, there exists a movement of similar characteristics between the bi-unitary archetype, beyond space and time, and its relative manifestation, in each here and now of the phenomenal world. As we have seen, the unified, whole energy-consciousness of the archetype is projected evolutionarily in finite forms over the successive levels of equilibrium in which the flux created by the apparent separation between the two poles is stabilized.

The whole reality of the origin is reflected and identified at each moment in every corner of the relative universe and returns, at that very same moment, to its primordial wholeness. Beginning with the fundamentally energy levels of the base, the circular process of leaving and returning between the archetype and its partial manifestation, progressively raises the plane of focalization at each turn towards higher levels of the spectrum, accompanied by higher degrees of consciousness. In the original moments, the differentiation is still scarce and hence the relationships are very simple. Gradually, however, the manifestation reaches increasing heights of depth and complexity. More complex structures of energy allow higher levels of consciousness to emerge; while, conversely, higher levels of lucidity foster a greater richness of relationships between forms.

The original reality is always the same, the polar unity of creative energy and pure consciousness, but its reflected image depends on the capacity of attunement and expression of the concrete form through which it manifests itself. As we have explained above, each moment, each step, each envelope, each life in its entirety reproduces according to its degree of aptitude, the same, single bi-unitary archetype. Each new perspective recapitulates all the previous steps, becomes integrated with them, and the whole, richer and more complex in terms of structures and relationships, allows progressively broader ranges of the non-dual fundament to actualize, reflect and experience within the phenomenal world. Thus, through this creative circular play between the infinite archetype and its finite reflexes, organisms unfold evolutionarily that are capable of revealing, the great secret of the universe in an increasingly diaphanous way, i.e., the intrinsic unity of apparently opposing poles. The creative energy of the origin is the very same pure consciousness of the summit. The goal we seek to achieve is identical to the source from which we proceed.

The overall dynamics of this unfolding can be schematized as a spiral movement in which all the turns, starting from a common focus, successively expand the scope of their embrace, increasingly expanding the margin of ambivalence between energy and consciousness. Paradoxically, the further each turn moves, the

more transparently it reflects the integrity of its source. The more distant and elevated the point of focus of the outgoing, the deeper the lucidity of its return. The universal flux is shown, in Salvador Pániker's words, as a "retroprogressive" dynamics that advances simultaneously toward the future and toward the origin. The march of the processes towards their end, surprisingly leads them towards their source. The evolutionary dynamics towards increasing complexity thus moves away from the origin to the same extent that it approaches it.

In the Western tradition time is fundamentally conceived as being linear and in constant progress, whereas in other cultures, it is interpreted as cyclical and in ever returning. Reality, however, begins to present itself as a combination of both movements, rectilinear and circular, in a fascinating spiral generating novelties without end. The cause that makes this simultaneity of moving away and returning, of fragmentation and unification possible is the bi-unitary condition of that primordial archetype in which the antagonistic poles of energy and consciousness are unified. It is this non-dual character of the origin which makes it the perpetual source of creativity and the inexhaustible driving force of the evolutionary universe, as no phenomenal structure can ever simultaneously harbour all its infinite riches.

### **3. THE INTEGRAL EXPERIENCE**

In the first two chapters of this book, we have set out a dynamic, non-dual perspective on the universe as a whole and on the human being in particular, but so far everything has basically constituted a merely mental focus on these issues. If everything were to remain so, in a simple theoretical exercise, this essay would in fact hardly be transformative. That is why, in this third chapter, we wish to invite readers to experience in themselves all the creative dynamics we have been discussing.

Based on the data currently handled by science, the human being constitutes the vanguard of the universe, the spearhead of evolutionary creativity, the living organism that has deployed and integrated the highest number of levels of the energy-consciousness spectrum. As we have seen previously, creativity is not at all an exclusive property of our species, but has been present in the universe since the very instant of the Big Bang. As we have also studied in the first chapter, the rhythm at which the major evolutionary developments have emerged has followed a very precise pattern over time. At this historical moment wherein we find ourselves, this rhythm of transformations has already reached very high levels. According to our research, however, the creative process –in us and through us– will be truly vertiginous in the next two centuries. In order to effectively and joyfully journey through this fascinating stage of history, it will be necessary to adopt a very precise attitude that will allow us to deploy and integrate the successive levels that will rapidly emerge –in both the inner and outer world– without being swept away by the whirlwind of events.

In the previous chapter, we saw how the true identity of all living beings is the same, unique, timeless, non-dual essence, call it *Nirvana*, *Brahman*, Godhead or *Tao*. Throughout the evolution of successive organisms, which have forgotten their original Self, have situated “the centre of gravity of their sense of identity” in the different levels of the evolutionary spectrum they were passing through. Thus identified with and attached to temporal and finite structures, and totally oblivious to their unlimited essence, they have wandered in complete ignorance, which, as Patanjali put it, is nothing other than “the identification of He-who-sees with the instruments of vision”.

Given this this panorama, our ancestors, clinging to their partial, limited perspectives, have experienced evolutionary leaps with great upheaval and suffering, both individual and collective. Bearing all this in mind and also aware of the vertiginous transformations that human beings are to experience in the next two centuries, it seems sensible to state that it would be convenient –or even imperative– to let go of all kinds of clinging to finite forms and locate “the centre of gravity of our sense of identity” in pure, unlimited, timeless essence. Thus installed in the immutable stillness of the Void, we would embrace the spontaneous creative flow of evolution without any resistance; i.e., we would live from within the eye of the hurricane the accelerated avalanche of novelties that are to take place –both in us and through us– in this definitive stage of history.

The question that now arises is: What can we do, therefore, to disidentify ourselves from temporal and finite forms and discover our true identity in simple, unlimited, timeless self-evidence? In the following sections, we suggest possible “work” guidelines which, in line with the great traditions of non-dualistic wisdom, will facilitate the opening up to that ever present self-evidence that we are and accordingly facilitate –or even foster– the free-flowing, joyful emergence of the successive creative waves that we are to experience in the immediate future.

#### **What to do?**

We are posing that our true nature is infinite and eternal wholeness, and yet we feel limited individuals bound in time. All spiritual traditions state that ultimate reality is pure, luminous joy, but our daily experience is plagued, rather, with shadows and suffering. In this situation, the immediate reaction of our egos

basically consists in searching for a path or system that allows us to reach that state of eternal bliss: What do I have to do to achieve liberation?

This desire of the ego to free itself from itself is deeply self-contradictory. It is not possible to overcome the hallucination of being an ego through strategies of the ego itself. Any attempt by the illusory self to transcend itself presupposes precisely that same illusion which constitutes the problem itself. That is to say, it admits from the beginning the reality of its own existence and, in this way, it only manages to reinforce and perpetuate the deception it seeks to destroy. Any operation carried out by this fictitious separate entity which we identify with can only strengthen its own fantasy and hence distance itself from the understanding of its true nature. The ego, therefore, can never achieve its purpose, because its premises on which it is founded are radically absurd. No activity involving a movement that has the separate self as its centre is capable of revealing the ultimate non-dual reality. Personal effort can change the behaviour of the individual, but in no case can it provoke its own transcendence. No phenomenal manoeuvre is capable of bringing about the falling of the separating veil of the ego, for the simple reason that the veil is pure illusion.

The ego can never be rid of itself. When it pretends to be nothing, it is already something. When it strives to be absent, its presence grows. When it tries to relax, it incites its own resistance. When it wishes to let go of its attachments, it creates new bonds. When it tries to achieve passivity and silence, its effort fills it with noise and activity. The illusory self is not capable of obtaining any spiritual achievement, much less its own enlightenment. Everything that it does to eradicate its conflicts, fears and desires is completely useless, because it is precisely this effort to flee from the present situation that generates its conflicts, desires and fears. All longing to achieve a goal –whether material or spiritual–, every desire to become something –or to be nothing– has the ego at its centre and hence strengthens and perpetuates it. The discovery of the infinite and eternal Self cannot be the product of an intentional search on the part of the separate self, because any attempt by it to reach its true nature, distances it from itself. The search for something always starts with the assumption of its present absence. Therefore, the ego's aspiration to achieve its Self in the future –which is, in fact, our eternally present reality– is precisely what generates the sensation of its lack at this present moment.

Any attempt to obtain a thing means pursuing an object by a separate subject. Any desire to improve on something, or to achieve a certain achievement, generates a separation between what is and what should be. Any effort or discipline in pursuit of realization creates a split between the seeker and the sought-after, and hence, far from revealing the non-dual reality that sustains both, it inexorably conceals it. True nature – which is the non-dual source of all apparent dualities– can never be ensnared in a subject-object relationship. In this respect, Zen master Bankei stated, "If you have the slightest desire to be better than you are now, if you persist, even if only minimally, in the search for something, you are already going against the Unborn." The problem is that the seeking subject and the sought object are, ultimately, one and the same thing. Hence the Self can never be experienced or understood objectively, as if it were a separate and distinct reality of the subject that experiences or understands it. There is no distance, either temporal or spatial, between the Self and the present situation; hence it makes no sense to look outside this precise moment and place. No path leads us here. No process brings us close to the now. All the paths of seeking thus separate us from the ever-present, immutable goal. Our desire to find the truth conceals the discovery of its crystal-clear self-evidence.

The key that facilitates the discovery of our true nature lies in the understanding of the experience of the present moment. Reality is so close that it is not necessary to look for it. As a medieval mystic put it, "If you do not seek it, you will find it." If we go in pursuit, what we do is flee from it. If we try to capture it outside of us, we always turn our back on it. If we long to achieve it in the future, we prevent its existence in the present. Even the subtle attempt not to depart from this present, the desire not to desire, continues to be a movement of resistance to what is happening in the now. We act convinced that the non-dual wholeness is absent and therefore we strive repeatedly to approach it, but as that wholeness is all that exists and there is no place where it does not, there is no way to come any closer to it. Nor to move away from it either. Any

effort to attain it only denies its eternal omnipresence. Any resolve to seek it constitutes a sterile artifice and an obstacle, because it puts off for tomorrow what can only be found in the eternal now. Any attempt to change our present state is nothing more than a useless distraction, because our own nature at this moment, prior to all effort, is already non-dual. As Ken Wilber puts it: "Yet again, the Self is not a reality that is difficult to achieve but impossible to avoid."

We lack nothing. There is nothing to seek. Nothing to obtain. Nothing to achieve. There is no "someone" who has to go somewhere. Neither is there anywhere to go. If we do not move, we have arrived. There is nothing to do to be what we are. It is not necessary to strive to build a different state to the present, but simply to recognize in our present, daily situation the eternal non-dual reality. There is nothing to achieve outside of what is happening at this time. Nothing special is required to experience the fullness of the Self. The only truly valuable achievement is to discover now what we have been forever. That is why the Buddha declared: "I gained nothing at all from Supreme Enlightenment." And in this sense, it is said that neither the wise man attains enlightenment, nor any living being ever loses it. It is sufficient, therefore, to stop seeking something other than what-is to find our bright, infinite nature. It is not about pursuing what we think we do not have, but about finding what we have never lost. We already are what we seek to be. The key to navigating this non-existent distance does not consist, therefore, in making bold efforts to get somewhere else, but simply to be present to the present and awaken to the clear transparency of this timeless moment.

Enlightenment is not a novel event obtained through the merits of the ego, or the product of some strenuous discipline. Enlightenment has always been our true immutable and eternal nature, which manifests itself radiantly when the illusory separate self disappears completely. That is why, when enlightenment takes place, far from having "someone" achieve it, there is the clear certainty that, in fact, no such entity has ever existed. The ego, however hard it may try, can never be enlightened, because when enlightenment comes, the ego is no longer there. Enlightenment can only arise when the one who makes the effort has vanished. It is thus necessary for the person we believe ourselves to be to get out of the way so that the wholeness that we really are can surface in a clear and transparent manner. Only when the separate self ceases altogether can the timeless be revealed. Yet it is not a matter of destroying any real entity, but of discovering that that entity has never really existed.

We therefore find that the ego is not capable, in any case whatsoever, of attaining enlightenment and, moreover, that the result of any attempt it makes to do so is that of preventing it from happening. However, it is also clear that if we remain identified with this illusory, phenomenal self, and cling to its petty and ignorant perspective, it will also be difficult for enlightenment to take place. As Zen master Ma-Tsu stated, "In the *Tao* there is nothing to discipline oneself in. But if there is no discipline whatever in the *Tao*, one remains an ignoramus." Similarly, the Sufi mystic Bayazid Bastami asserted, "The knowledge of God cannot be attained by seeking, but only those who seek it find it." For although awakening is not the result of our research, it never happens without our research. If we do not do something about it, we will continue being precisely where we are.

We thus find ourselves at a complicated crossroads: if the ego does something to enlighten itself, its very efforts prevent it from doing so; but if it does nothing, enlightenment will not be achieved, either. The key to solving this dilemma is to understand that action should not be aimed at pursuing absolute reality, as if we did not currently possess it, but to unmask the lie with which we are deceiving ourselves at every moment by identifying ourselves with a narrow, relative entity. That is, in no case can the search approach the goal, as we have been in that goal forever, but it can help us to transcend the absorptions that seem to hinder the recognition of our true nature. We already are the Self and hence it is unnecessary to do anything to achieve it. It suffices, therefore, to unmask the illusory character of the separate self, so that the wholeness we have always been may be revealed. Our essential Nature reveals itself spontaneously when the egoic entity has completely disappeared.

Non-dualistic philosophers like to say that when the illusory is perceived as illusory, in that same understanding resides the Truth. All the great spiritual traditions coincide in putting forward “special conditions”, adequate but not mandatory, that facilitate the recognition of the fictitious character of the ego and, with it, the realization of the Self. These conditions reveal the mechanisms of resistance of the separate self, thus allowing its transcendence. In the following sections, we shall try to point out the central characteristics of this recommended attitude, which simplifies the transition along the distanceless path between the illusory self and the real Self. It is basically a simple gesture of watchfulness and detachment that lays siege to the absorbing phenomenon of identification, which is the fundamental cause of our deception, thereby opening the door to the emergence of limitless wholeness. It is not, however, a question of this gesture of “attention without choice” leading to enlightenment, but rather that this attitude of lucidity and acceptance is already, in itself, an expression of the self-evident luminous opening that we have always been. Spiritual research, in fact, is not done to arrive at silent emptiness, but already occurs within that all-embracing emptiness.

Within the framework of non-dualistic traditions, some schools propose a sudden path to realization, while others pose a gradual path. The former are essentially based on the fact that the Self is not in the process of becoming, but in the eternal present, and hence state that any movement to seek it out is to move away from it. The latter, on the other hand, are based on the fact that the phenomenal individuals unfold via evolution and hence argue that the dynamics of disidentification must be equally progressive.

On the direct path, which properly speaking is not really a path, the possibility that we are already and endlessly realized is accepted from the outset, and that enlightenment is our true and eternal nature. It is suggested, therefore, that it is sufficient for us to profoundly relax our egoic habits, so that the wholeness that we already are may emerge clearly. Transmutation does not take place step-by-step, but rather that all that is dispersed is instantly and suddenly integrated into a global unity. The state of realization is not the goal here, but the beginning of the journey of exploration of the phenomenal world.

On the progressive path, in contrast, it is emphasized, rather, that fundamental reality is enveloped by a series of coarse or subtle reflecting screens which must be transcended before discovering its luminous source. As on the direct path, it is also argued here that enlightenment emerges suddenly and unexpectedly, but it is emphasized above all that the process of disidentification of these successive envelopes or casings that maintain us in this state of deception is carried out step by step. In practice, therefore, the discovery of the Self is posited as a future goal.

The path of research that we shall propose next is in keeping with the teachings of both schools. It points to the Self that we really are and, at the same time, to the separate self that we illusorily believe ourselves to be. It is a direct path, because it permanently rests on the eternal present; it is also simultaneously progressive, because it helps one to perceive the absorbing identifications, one by one, and hence eliminate them successively. Enlightenment is thus both goal and path, aim and presence, future event and eternal now. It is thus possible to speak of an evolutionary process to see what we are not and of an instantaneous awakening which completely transcends all kinds of processes to discover what we have forever been.

### **An inward journey.**

As we have discussed above, all the universal evolutionary processes, starting out from the pole of original energy and orientated towards the pole of final consciousness, successively deploy deeper and deeper levels of the spectrum of reality. Since at the origin the aspect of consciousness is fully identified with and absorbed by the energy aspect, we can schematize these processes by saying that all courses of developmental basically consist of the progressive disidentification of the conscious facet with respect to its energy antagonist. From this point of view, evolution is essentially a process of increasing deepening of and interiorization in the sphere of consciousness. With each new level of evolution greater autonomy is

thus achieved with respect to the environment, a broader and more comprehensive perspective of reality and a deeper, more lucid identity.

The mystical path to enlightenment is but the vanguard of this evolutionary dynamics of increasing interiorization. It is basically a step-by-step development of progressively more lucid levels of consciousness which, by being integrated in a healthy way with the entire spectrum that has already emerged, give rise to new energy-consciousness structures that more and more transparently reflect in the phenomenal world the non-dual basis from which they originate. The broader the range of planes of reality simultaneously encompassed, the greater the distance travelled on the evolutionary ladder, the easier it will be for the centre of gravity of the sensation of identity of the developing organism to slip spontaneously towards its luminous source in an instant of radiant awakening.

Both the energy base of the evolutionary universe and its conscious summit are direct expressions of the same, unique, non-dualistic fundament. There is no more presence of the full emptiness in any of the spectrum levels taken in isolation. There is no more Self in the pure ultimate consciousness than in the original creative energy. Or vice versa. Thus, in principle, it may thus be somewhat shocking to state that the path to enlightenment is oriented towards the interior of consciousness, when, in fact, the non-dualistic fundament completely transcends these concepts of interior/exterior, subject/object and consciousness/energy. As we have just pointed out, the explanation is that, in the evolutionary course, the energy pole must be fully integrated with the pole of consciousness, in order to manifest the non-duality of its common source in a unified, simultaneous way in the phenomenal world.

As we shall see below, all the great spiritual traditions state that the path to discovering supreme reality heads unequivocally towards the depths of our own consciousness. Yet it is not because the Absolute resides in the internal, but because it is in this direction in which the process of disidentification develops. It is thus important to make clear from the outset that the ultimate goal of this journey, as all traditions also uphold, is not an egocentric subject facing an objective world, but a radiant non-dualistic self-evidence that belongs neither to subject nor object, but embraces and transcends both.

When, as an individual, one delves into the depths of one's own intimacy, on surprisingly discovers that one's ultimate nature is the very source of all reality, the lucid opening from which all worlds arise, in which they manifest and to which they return, from moment to moment. The ultimate pure consciousness is identical to the original creative energy, the true inner Self is actually the whole of the outside universe, the authentic subject observer is none other than the integrity of the observed objects. And vice versa. Thus, we reach the higher through the inner, the beyond through what is here and now. Only by entering into ourselves will we be able to go beyond ourselves. Only by deepening our inner self will we at last be freed from our illusory separate identity.

"The kingdom of heaven is within you," state the Gospels. The Qur'an states, "He who knows himself knows his Lord." According to these monotheistic traditions, God is the profound centre of our being, the depth of our soul. God is closer to us than we ourselves are. Some theologian has even proposed to give the word "God" the meaning of "depth". It is not possible, therefore, to seek God other than by submerging oneself in one's own inner self. The path of return to God can only be initiated and trodden by returning to oneself. It is necessary to reach the most intimate and hidden core of oneself, to find, beyond it, truth and God. It is thus stated that he who enters into himself and, by penetrating within himself, transcends truly ascends to God. In this respect, Meister Eckhart stated, It is necessary to get to God by looking for him in the central point of the soul. At this culminating point, man becomes one thing with God, he becomes God himself." Or in the words of the Sufi mystic Jalaluddin Rumi: "I searched my own heart; in that place I saw Him."

The primary goal of Taoist mysticism is to return to the source, to the pristine original state. To this end, it is recommended to turn the mind onto itself, inward, and contemplate its inner radiance. Our greatness does

not come from ourselves, but from the *Tao* we carry within. The One hides within us as a mysterious pearl under the dust of worldly things. It is thus vain and useless to seek some good outside of ourselves, in the domain of external things. Only inner inquiry can lead us to rediscover that hidden treasure within the deepest corners of our mind. Through meditation, we can access to the ultimate fundament of *yin* and *yang*, and thus immerse ourselves quietly in the boundless ocean of the Void. The mind that returns to its source, itself becomes the origin of “the ten thousand beings”.

All Hindu mysticism starts out from the brilliant discovery of the identity between *Atman* (the source of the individual subject) and *Brahman* (the source of the objective universe). The immediate path to discover this non-dualistic fundament is thus our own innerness. Thus, the central aim of all spiritual practices in this tradition is none other than to shift the centre of our identity from the *jiva*, or illusory phenomenal self, to the *atman*, or real Self. Here, too, it is basically a matter of reversing the direction of the mind and, instead of extroverting it towards outer things, to focus its totality inwardly. In observing the source from which the mind comes, the hidden source from which the self flows, one discovers, with clear evidence, that the inner Self is the same inner Being of all things. Knowing your Self, you know the whole universe.

In the Buddhist tradition, it is stated that Buddhahood is the realm of sacred wisdom that dwells within us. If one wishes to meet the Buddha, one must inquire into one's own nature, for this nature is the Buddha himself. It does not make sense, therefore, to seek it outside of ourselves, in external things. How is it possible to find oneself by looking outside oneself? The Buddha is the mind itself. The light of any moment of consciousness is the very essence of Buddha. For this reason, the advice of the old masters is unequivocal: “turn your attention onto yourself”, “observe the mind that thinks, who is thinking?”, “all you need is to know the mind and reach its origin”, “penetrate directly to the most profound until realizing your Buddha identity”, “take one step back towards yourself until you can contemplate reality and experience enlightenment directly and undeniably”. When we perceive our original Buddha nature, the inner sky reveals itself identical to the outside world. The Void and forms are not two.

We thus see that all the great mystical traditions unanimously invite us to delve deep into the bottomless pit of our own consciousness to discover its ineffable source. The discovery of this eternal, infinite reality is the goal of all spiritual seekers, but it should not be forgotten at the outset that the price to pay for this is the total abandonment of the ego, the complete disappearance of the sense of separate identity. Only one who is willing to be truly annihilated as an independent entity, only one who is ready to be definitely nothing, may be able to complete the journey into the inner abyss and thus discover the resplendent empty wholeness.

The fear of the loss of the separate self is the last obstacle that must be overcome on this distanceless path to one's true identity. When we delve deep within ourselves and begin to experience wider dimensions of consciousness, the individuality with which we uniquely identify frequently feels immense fear of the new situation. Until then, it had been blindly clinging to the idea of being a solid subject, confronted with a world of objects; while now, as the border that isolated it from the environment begins to fade, the prospect of its extinction is found to be terrifying. It had become accustomed to the petty life of the limited I, and so, in the face of the first glimpses of the non-dual, it imagines that, without the ego, it will cease to exist. On the threshold of the great Void, when the illusion of being a separate entity begins to break apart, the individuality feels a frightening vertigo before its imminent disappearance in the dazzling emptiness.

Accustomed as we are to feel ourselves as solid, independent entities, we are terrified to begin to discover the absence of limits and the insubstantiality of our self. The loss of control of the situation, the disappearance of all sense of self, the fading of our imagined identity, the immersion in an unfathomable and unknown realm, the final dissolution into nothingness makes us panic. Although we had been searching for enlightenment for many years, it is very likely that, as we face the non-dualistic abyss for the first time, we would recoil in fear. We would instinctively cling to our old idea of ourselves, aware even of

the pathos of this self-deception, and even if that meant rejecting the enlightenment which, at another time, we so longed for.

The separate self is terrified by transcendence, because it implies the definitive death of its presumed existence. The ego would like to make this journey through the deep ocean of the unknown without leaving the already frequented shores of the finite world, where it feels safe. That is why, when it enters this vast and silent region of consciousness, with no centre or periphery, and it feels the narrow limits with which it identifies and is defined, it shudders and recoils in horror. In this respect, a Zen master stated, "Human beings avoid abandoning their minds at all costs, because they are afraid of falling into the Void without having a point of support to grasp. They ignore the fact that emptiness is not a vacuum, but the ultimate, unique and true *Dharma*. While Po-shan advised: "Bravely let go on the edge of the cliff. Throw yourself into the Abyss with decision and courage. You only revive after death!"

It is the ego, the image we have of ourselves, who is afraid to jump into the Void and abandon the world of imagined duality. Because the only thing that really dies when we enter the abyss of the unknown is this illusory interpretation of our identity that makes us feel separate from the world around us. That is why, at the moment when we cease to identify ourselves with this supposedly independent self, the fact of being without duality is no longer frightening. Emptiness is only terrible from the point of view of the ego and its desire for permanence as an isolated entity, but for the all-embracing Self it is simply its joyful and luminous eternal nature. The undifferentiated is only frightening from the perspective of personality, but once this illusory approach has been transcended, the dreaded abyss is revealed as radiant, pristine and serene luminosity, which surprisingly lacks nothing. What the relative self imagines as its absence is no other than the absolute presence of self-evident wholeness.

Only by throwing ourselves confidently into the unfathomable transparency of the Void can we discover the infinite riches of our true nature. Only when our ego completely dissolves does the true Self radiantly appear. It is thus necessary to have the courage to face the total Void, to assume formless reality and to fall into the abyss of the unknown, without expecting anything, without support from anything and aspiring to take refuge anywhere. It is not a question of eliminating the feeling of fear, but of fully accepting it. By fully accepting the present situation without pretending to change or flee from it, the ego, which is merely a gesture of resistance to what is happening, disappears instantly. And along with it, fear, because fear only exists when the experiencer is separated from experience. Then the fundamental transformation takes place: we are no longer a terrified ego irremissibly falling through a threatening abyss, but we ourselves are that empty and full abyss. Our ultimate identity is that very emptiness. And there, there is no death; how can nothing have an end? Forms appear and disappear, but the Void remains unchanged. The experience of that emptiness is the beginning of wisdom.

### **The search for self.**

We are convinced we are independent entities, separate from the environment, autonomous in our decisions, free and responsible for our actions. As we have stated above, the absorbing identification with this illusory idea is the main obstacle that seemingly prevents us from discovering our true identity at this moment. Is it true that we are not isolated, autonomous selves? The simplest way to verify the existence – or nonexistence – of this alleged separate entity is simply to seek it carefully and meticulously. If we find it, our proposition will have to be rejected altogether. But, if however hard we try, this independent self does not appear anywhere, perhaps we are then on the threshold of discovering the true, non-dualistic Self. The journey into the inner mind, which we have discussed in the preceding section, is but another name for this search for the separate self. It aims, in short, to find the source from which consciousness springs, the innermost centre of the subject, the ultimate depths of the soul.

We all have the feeling of being independent subjects, separate from the current of our experiences and the world around us. We believe that we are isolated entities that *have* experiences, but we *are not* these

experiences. We are convinced that we are autonomous selves who feel sensations and think thoughts, but that we are different from these sensations and thoughts. We dissect the immediate experience of the simple “experience” into an “experiencer-who-experiences”, and we identify exclusively with the subjective aspect –with the experiencer– of this unitary process that is completely indivisible. We thus overlook the evidence that it is not possible to have an experience without an experiencer or an experiencer without an experience. Starting out from this deep-rooted and illusory belief that we are mere subjects acting in a world of external objects, we can only overcome this mistake if, in our attempt to find this separate entity that we imagine ourselves to be, we are not able to find the slightest trace of it, no matter how much we inquire. As the Buddhist sage Padmasambhava put it: “If the one who seeks is sought and cannot be found, this will achieve the purpose of the search, and also the end of the search itself.”

If the experiencer that we believe actually was a separate entity from the flow of the world, it would suffice to successively eliminate all the planes of the experienced universe –material, vital, mental and soul– in order to finally discover, at the bottom of everything, this independent subject we assume is our ultimate identity. We have sensations, but we are not these feelings, but the-one-who-feels. We have emotions, but we are not these emotions, but the-one-who-feels-emotions. We have thoughts, but we are not these thoughts, but the-one-who-thinks. Thus, by discarding, all the coarse or subtle objects that appear before the observer one-by-one, we will gradually approach the definitive answer. Perhaps we shall thus find ourselves surprised by the fact that, like in an onion, after removing the successive wrappings one at a time, there is nothing in the core. Perhaps, as we shall see below, the subject was but the totality of the discarded objects, and we did not find it simply because it was not one of its parts taken in isolation as we had thought it to be.

To make the journey to the innermost depths of ourselves, whatever its end, it will suffice to consider, in principle, that none of the observed objects is the observing subject that we are seeking. All the things we can see, externally or internally, are not the self that sees them. If we are able to objectively perceive nature, body or mind, it is evident that the ultimate subject is not one of these different perceived realities. The origin of consciousness cannot be an object of consciousness. Nothing perceived can be the definitive perceiver. Nothing that can be called “this” or “that” is the true Self. It is therefore necessary to get rid of the usual claim of defining ourselves positively. And it is thus possible that, by knowing everything that we are not, we may perhaps discover our true nature. “If I am not this, or this, or this neither, then, who am I?” This will be the key question that we must constantly ask ourselves in our exciting journey towards the centre of consciousness.

Inquiry into the self should not be focused as objective and conceptual –given that the subject can never be an object–, but rather as introspective and experiential investigation. The aim is not to achieve a theoretical, discursive and verbal answer, but to make a continuously renewed and fresh living discovery. The question “Who am I?” can serve as the tool that allows us to redirect attention from perceived objects to the perceiving subject. This exploration consists basically of taking steps backwards in the flow of our own consciousness, disidentifying ourselves, one after another, from all the objects that we perceive or that we can manage to perceive. Gradually, attention will withdraw from the seen and the act of seeing and will fall more firmly on the-one-who-sees. No ritual or external form is required for this purpose. All that is required is to ask oneself, whenever a perception arises, who the perceiver is. If a thought appears, who is thinking it? If a desire appears, who is wishing it? If an affliction appears, who is afflicted? Ramana Maharshi said: “Whatever the problem, the answer is to perceive, at this moment, who has the problem”. It is therefore a matter of perceiving here and now, with a simple attitude of openness and lucidity, empty of all content, the subject that is asking the question at this moment.

The goal of life is none other than that of discovering the one who lives it. To achieve this, it is necessary to turn one’s attention inwards and to investigate, silently and deeply, the origin of the self, the source from where the mind arises, and to remain there. During the initial stages of inquiry, it is essential to make an effort to transfer attention from perceived objects to the perceiving subject. However, once the mind has

firmly established itself in the simple feeling of being, without identification, any further effort is counterproductive. Personal effort can only be extended up to that point, and from then on, the beyond will take care of itself. All that needs to be done, therefore, is to focus one's mind on the pure sensation of the "I am", completely transcending any notion of being "this" or "that". It is thus enough to become aware of one's existence, in any situation of daily life, as an ever-present fact. This simple awareness of being is the last veil that seemingly conceals the empty wholeness that we really are. A state that cannot be verbalized, but which can be experienced.

The search for the separate self is eventually solved with the evidence that this does not exist as an independent entity, nor has it ever existed. All the efforts to find it, totally fail, again and again. Even submerging to the very source of one's own consciousness, nowhere is there the slightest trace of any experiencer aside from experiences. When it comes to the end of the path, the presumed egoic entity that initiated the search process has vanished completely. Deep down, there is no-one. Radically no-one. Only a pure, clear consciousness without any centre. But that no-one, or that not anyone, is precisely the key that unveils the answer to the question, who am I? That final no-one is the definitive opening towards the full and unmistakable experience of the infinite and eternal, self-luminous Self. The ineffable non-dual reality that we have never actually abandoned.

Just as an eye that can watch the world is not able to contemplate itself directly, the ultimate knower who can know all things is not able to know itself. In every observation there is always an unknown aspect, which cannot be observed because it is precisely the-one-which-observes. Our true Self cannot be known, for the simple reason that it is not possible to turn it into an object of knowledge. It is too close to be seen. One cannot get away from it to observe it from the outside. The real Self always escapes any kind of inquiry because it is the inquirer itself. The reason that it is not possible to see God is not that God is a distant or forbidden reality, but that, being the very centre of the observer, God is never before one's gaze to be contemplated as an external object. That is why in one of the *Upanishads*, God is defined as "that which is not seen by the eye, but by which the eye is able to see". The-one-who-sees cannot directly see itself seeing. Every eye has a blind spot. Hence, there is always a sense of deep mystery about our true identity. The Self can be experienced –we are That in every moment–, but it can never be objectively perceived in its integrity. Being non-dual, prior to the subject-object split, it is eternally unknowable to us, but at the same time, is there anything we know better than the immediate self-evidence of being at this moment? Its evidence does not consist in seeing it, but in being it. Do we deny the existence of our eyes even though we do not see them?

### **Regarding discernment and detachment.**

The key to bridging the illusory distance that separates the phenomenal self from the real Self is a permanent attitude of attention and letting go, of watchfulness and abandonment, of discernment and detachment. As a Ch'an master said, simply "open your hands, let the world come and go, and look". We start out from a situation of identification with an alleged separate individuality, and we need to undo this absorbing mirage to discover our true nature. It is not a question of striving to become the Self –because, in fact, we have been the Self forever– but of conscientiously and insistently seeking that autonomous entity that we believe ourselves to be, and, in this way, verify in an experiential and irrefutable way its total absence. The process, in short, is something like this: although we are the whole, we imagine ourselves to be a part, but when we seek but do not find it, only then do we realize our true, unbounded identity. The paradox of this path is that in order to discover the totality that we are, we are invited to differentiate ourselves and gradually detach ourselves from everything. Only via this detour can we finally understand the total nothingness of our separate existence. And when the isolated self, which sets us apart from the rest of the universe, is discovered as nothing, the evidence of our full eternal identity is spontaneously revealed.

The attitude of discernment that is advised to unmask the illusory, phenomenal self basically consists in distinguishing between and carefully and painstakingly separating in each situation of everyday life the observing subject from the observed objects, the spectator from the spectacle, the eye that sees from the things that are seen. It is, therefore, a question of breaking the habitual tendency to identify with the contents of our experiences, through a permanent attitude of alert attention. The simple gesture of taking a step back in consciousness to observe the different activities in which we entangle ourselves in each moment has an immediate liberating effect. The mere fact of perceiving the mechanisms of identification, which have us trapped in a misleading and petty perspective of reality, instantly create an apparent distance between the perceiver and the perceived that frees us from the obfuscating absorption in which we find ourselves. Thus, at the very moment when we become aware of any perception, we automatically place ourselves outside of it, thereby deactivating any kind of implication or identification with what is perceived. Thus the centre of our identity is displaced from the content to the container, from the realm of finite forms to the empty womb that constitutes and envelops them.

The essential thing is to keep one's centre of attention on the pure sensation of being, without being caught up by emotions or thoughts, thus establishing a clear distinction between fleeting, perceived forms and the immutable consciousness that perceives them. It is fundamental to observe vital or mental movements as if they were not one's own, as if they constituted realities apart from ourselves, because only when we feel different from something can we fully abandon it. Only when we realize that the observer is none of the observed objects can we begin to transcend what we identify with. It is therefore necessary to maintain a permanent state of attention to the present situation, focusing the emphasis on the spectator who contemplates and letting the contemplated spectacle flow by itself. It is thus simply a matter of observing and releasing, of watching and disengaging, of looking and disassociating, thus occupying the position of the detached witness, who neither accepts nor rejects anything that happens. By thus placing the accent on the observing consciousness and letting the observed forms flow by themselves, we can gradually delve deeper into the ray of lucidity until its origin; that is, to the ultimate witness, of which there is no longer anything to witness. This ultimate pure consciousness, which impartially perceives the totality of the forms of the world, constitutes the definitive opening that gives way to the self-evidence of non-duality, in which all separation between objects and subjects, outer and inner, energies and consciousness is transcended.

If we are attached to the object, how can we see the subject? The attitude of discernment or distinction between the spectator and the spectacle must be complemented by a permanent state of detachment from everything observed. If we seek to find the autonomous subject that we believe ourselves to be, the presumed ultimate experiencer who experiences the experiences, it is absolutely necessary to get rid of all kinds of identification with any objectivable reality. As we have seen previously, both the universe as a whole and all the individual beings that compose it start out from an original situation in which the conscious facet of reality is completely absorbed by the energy facet. From this point of view, the entire dynamics of evolution can be understood as a gradual process of disidentification of consciousness with respect to energy, as if all phenomenal reality were trying to find its ultimate identity. The search for the Self on which we have embarked only continues this movement of interiorization towards the source of consciousness.

The sense of identity of the developing individual being progressively changes throughout the entire process of growth. At each stage of the journey, the self is dominantly trapped by the characteristic structure of a certain level of reality, but with the emergence of a new structure with greater depth and lucidity, the self ends up identifying with this structure, dissociating from its exclusive absorption with the previous level. The process of ascent up the evolutionary ladder as a whole is thus a successive process of identification and disidentification, from the denser energy planes to the more subtle planes of consciousness, through which the self gradually displaces its centre of gravity toward planes closer to the ultimate, totally detached witness. Starting out from the primitive state of fusion with matter, the living organism differentiates and disidentifies itself from its dominating absorption with the physical environment, the mental ego, in turn, differentiates and disidentifies itself from its dominating absorption with the living

organism, the soul-witness, for its part, differentiates itself from its dominating absorption with the mental ego, and finally, as we shall see later, non-dualistic wholeness completely transcends any kind of dominating identification with any level of the phenomenal world, whether this be near to the energy base of the spectrum or to the conscious summit.

The path to the ultimate source of consciousness is pursued, step by step, via this simultaneous process of discernment and detachment. By means of discernment, the subject is perceived as a differentiated reality of the observed object, while via detachment, a distance is generated between the two that allows the displacement of the centre of the sense of identity towards new, progressively more lucid and subtle levels. Maintaining this separation between the spectator and the spectacle at all times, it is possible to attentively observe the entire play of phenomenal forces without being ensnared by them. When people ceases to identify exclusively and subjectively with their sensations, emotions or thoughts, when they are able to objectively observe all these processes without being confused with them, they no longer use them unconsciously to look at the world, and therefore cease to distort reality with their attachments and fears, thus being able to contemplate it as it truly is. Full lucidity thus emerges in the state of total disidentification.

The process of disidentification of the ego supposes transcending it, not denying it. The aim is not to eliminate or combat the psychosomatic organism and its functions, or to flee from the phenomenal world. The aim is not to fight the agitation of desires or prevent the wandering of thoughts, but only to not identify with them, keeping our selves impassive as silent spectators of events. These feelings of unease and conflicts will spontaneously subside when we cease to sustain them with our absorbing attachments. It is thus not necessary to destroy anything that appears. It is simply enough not to let oneself be ensnared by it. The path of detachment does not consist in inaction, but in ceasing to identify with activities. It is about being detached *in* action, not *from* action. The key is not to feel oneself as the agent of these actions, but as their unbiased viewer. The essential thing is to place oneself in the position of serene observer of the active external personality, refraining from being absorbed blindly into its manoeuvres. In this way, we can contemplate all the movements of one's environment, body and mind as merely impersonal, spontaneous processes, thereby moving closer towards the lucid perspective of the transpersonal witness, which we will soon discuss.

### **Attention without intention.**

The work of inquiry into the source of our own consciousness is fundamentally based on an attitude of permanent attention to and watchfulness of the present situation. The simple gesture of unbiased attention to the reality that emerges, inwardly and outwardly, at each moment can, on its own, fully unmask the illusory separate ego with which we identify. The mere fact of consciously observing any situation automatically creates a distance between the observer and the observed that undermines the very basis of the phenomenon of identification. It is thus essential that this surveillance be carried out in a completely detached way; that is to say, without the slightest intention of intervening, in any sense, in the panorama that is perceived. Otherwise, the contemplating subject would confuse themselves with some particular object of the contemplated world. And the subject who sees, let us recall, cannot be any of the seen objects.

If identification reduces the field of consciousness, the simple gesture of unbiased attention extends it. Therefore, the process of disidentification is basically carried out through a pure "awareness without choosing" with respect to what happens at each moment. In short, it is a question of being lucidly attentive to the flow of events, both inner and outer, without trying to bring about any change in them and without intervening at all in their spontaneous unfolding. It is simply a matter of realizing what is happening from moment to moment, without getting involved in any kind of interpretation, judgment, criticism or comment. It is attention without intention, which neither compares, evaluates, encourages or rejects. It is the innocent regard of the course of events, free of reactions and resistance to what is seen. Without justification or condemnation. Without interference or identification.

Whatever the spectacle being contemplated, the observer confronts the facts as they are, impartially, without attempting to escape or fight them. Without getting caught up in them, either. The observer does not oppose the flow of life or try to manipulate it in any way. It is simply a matter of serenely and attentively contemplating the unstoppable process of emergence, presence and disappearance of experiences, without attachment to anything that appears. The observer's mind is thus like a clear sky in which cloudy forms emerge and dissolve on their own. Without attachment to what is pleasurable nor rejection of what is painful. Like a mirror, everything that appears in the field of one's consciousness is perceived and then let go. Everything is welcomed yet nothing is held onto. The observer accepts that what is is. And welcomes everything, without prejudice or expectation, without desires or aversions, remaining open and silent, without making any choice or having any preference.

Maintaining this attitude of attention without intention does not require any kind of effort, but rather the contrary, as it is a question of simply seeing "what is", not of seeking "what should be". There is certainly no room for indolence or neglect in this process; as such a disposition is not compatible with the inner gesture of awakened lucidity we are describing here. Attention without intention is thus a simultaneously active and passive state. Active, in the sense that it demands extreme and permanent watchfulness with respect to everything that happens. But also passive, in that it aims to do nothing, absolutely nothing, apart from purely seeing and being. Understanding can only come when the mind has ceased altogether in its efforts, when it no longer becomes entangled in the play of opposites and conflicts, when it does not resist anything that emerges, nor represses nor supports it, but rather welcomes everything fully in a silent, boundless embrace.

Now, as we have said, it is the only thing that is real. Our egos, however, permanently try to move away from this now and thus maintain their illusory separate existence. Attention without intention completely breaks this tendency to flight and centres the consciousness in the strict situation of the present. Even memories of the past and expectations of the future are contemplated from this wakeful vigilance as mere experiences of the present moment. The simple act of paying attention at every moment to the spontaneous flow of things radically undoes any inclination to identify with the elusive ego and thus falls in tune with the perspective of the eternal present, characteristic of the Self. It suffices, therefore, to take note of events at the same time and place they occur; it suffices to be present in the present, whatever the situation we find ourselves in; it suffices to be alert to everything that arises in the here and now, moment by moment, so that the centre of our identity will slide effortlessly towards the source of consciousness.

We usually live absorbed in our thoughts, memories or projects, connecting very slightly with the present situation. Through pure conscious attention to our own organism, we can immediately recover the lucid experience of the present moment. The mere observation of bodily sensations or, better yet, the overall perception of one's own body in any circumstance, prevents us from distracting ourselves with automatisms and imaginations, and focuses us instantaneously on the here and now. Likewise, simple impartial monitoring of the flow of our thoughts and emotions at the same moment in which they arise, without letting ourselves be trapped by them and without rejecting them, brings us closer in a natural way to the realm of pure consciousness at the summit of the spectrum. Accustomed as we are to identifying ourselves predominantly with the incessant games of our minds, it is expedient to insist on this necessity to observe way all the mental movements in a very special without allowing ourselves to be hypnotized and entangled in their webs. It is not a question of trying to stop, repress, correct or improve them, but simply to contemplate them as if they were objects apart, without involving ourselves or becoming wrapped up in their processes. It suffices to be alert and directly aware of any sensation, feeling or idea that arises, without approval or censure, without adhesion or aversion, to free ourselves from identification with these finite forms; an identification which distorts our perspective of present reality. All you need to do is observe and let go. In the words of Meister Eckhart, "Examine yourself, and wherever you find yourself, then take leave of yourself." Or as Jiddu Krishnamurti put it, "Only in the understanding of what is is there freedom from what is."

No special scenario is required to adopt this attitude of passive watchfulness to the present situation. The key lies not so much in the type of observed events, but in the pure fact of paying attention. Any circumstance of daily life is suitable to carry out this inner act of attention without intention. When in the shower, eating, walking, talking, working... any daily activity can be experienced from the perspective of the detached witness. On the path of disidentification, it is essential to maintain that awakened awareness throughout the day, in the moments of acting, receiving or resting. It will not be possible to discover the ultimate subject apart from the tasks in the world of objects, or outside the field of relationships, because daily life is precisely the broadest mirror into which we can gaze to expose all the games of our illusory ego and thus begin to transcend them. That is why Zen master Yuanwu advised, "You should not reject activity or pursue silence. It is sufficient for you to remain empty internally as you harmonize with the outer world." To realize our true nature, it is necessary, in practice, to previously take this detour through the phenomenal world. To know our real, clear identity, we must first pass through the knowledge of the universe of forms. In fact, the basic purpose of the world of objects is none other than to reveal the ultimate subject and, in this way, discover the ineffable common source.

Attention without intention must therefore embrace the whole picture. It is not sufficient to take note of objective reality; it is also necessary to simultaneously be aware of the entire range of subjective reactions that are provoked, as well as their mutual interplay. In this way, it is possible to transcend all identification with partial aspects of the overall spectacle and become in tune with the perspective of the non-dualistic fundament. Attention should not be focused on any particular point, but rather on receiving everything that appears at any moment, in a simple way, without the slightest effort, without becoming involved in the flow of things. It requires impartial attention to the totality that includes everything, that grasps everything in a single glance, that embraces everything in a lucid, silent and unbiased opening. It is necessary to observe the situations of the world around us and, at the same time, to perceive the echoes they produce in us in the form of emotions and thoughts without identifying ourselves with them, without attempting to recognize ourselves in anything that is perceived, without placing our expectations in what occurs.

Throughout the process of discernment, we insist, it is also essential not to lose sight at any moment of the pure sensation of the "I am", detached from everything, as a silent witness of the flow of life, as an observing substrate of all activities, as an overall presence that permanently takes in all that emerges. The environment, body and mind are all in equal measure simple phenomenal forms that unfold before the pure consciousness of the transpersonal witness, the ultimate refuge of the separate self, the final point of the process of discernment, the backdoor to non-duality.

In the state of ultimate attention, there is no "someone" who is paying attention. The whole phenomenal spectacle plays out against an impersonal and immutable backdrop of silent lucidity. That is why, ultimately, attention must be capable of simultaneously embracing the empty presence which generates and contemplates the world and the entire spectrum of contemplated forms, the eternal and immaculate source of light and the whole of its infinite, fleeting self-reflections, the immense, clear, original opening and all the dynamic landscape that fills it. In non-dual reality, when the consciousness that understands the world is perceived as being identical to the energy that constitutes it, there is no inner or outer, no contemplating subject or contemplated object, because the observer and the observed are revealed as one and the same thing. While the Void continues to spontaneously unfold, from moment to moment, its infinite wealth in the eternal dance of life. As it has always done. As it is doing now.

What we have been calling attention without intention in the preceding paragraphs is basically what is known in Eastern traditions as meditation and in Christianity as contemplation. This receptive, silent meditation has nothing to do with any technique of concentration. Concentration tries to focus attention on some particular point, to the exclusion of all others, and therefore involves the choice of a goal, resistance to something, dual activity to achieve something and reinforcement of the ego. Meditation, on the other hand, is completely afocal and all-embracing, it does not exclude, propose or opposes anything and the ego has nothing to do there. Meditation is not an activity, but a state of being, and therefore not something

that can be practiced or cultivated. It is not an act of the will, but occurs by itself. The ego cannot meditate, because the very essence of meditation is precisely the absence of the meditator. Only when the meditator disappears, only when the mind is in complete silence and tranquil can the radiant self-evidence of the Self arise. Meditation is thus the path and the goal.

### **From resistance to abandonment.**

Our habitual feeling of being separate, autonomous beings is no more than the sensation of resistance we offer to our true, infinite and eternal nature. What we perceive as our isolated self is no more than this inner contraction, this permanent attempt to separate ourselves from our real Self. It is not that the separate self *feels* this resistance, but that the separate self *is* itself resistance. As long as we are aware of being independent entities, apart from the flow of things, all we do is resist and distance ourselves from our true nature. Even the well-meaning attempt not to distance ourselves will continue to constitute resistance to the reality of the present. But the mistake, let us say, is not in what the ego does or does not do, but in what the ego is. However much it tries, the ego is utterly incapable of discovering its real identity, for the ego itself is precisely the gesture of resistance that prevents this discovery. Its entire life revolves around the goal of protecting itself and raising borders around itself, which is, in itself, suffering. It is not possible, therefore, to free the ego from tension, deceit and the sense of unease, because the ego itself is tension, deceit and the sense of unease. Thus, as stated in Buddhism, to end suffering, it is necessary to abandon the self, as both are born and die at the same time.

We are permanently rejecting the present situation through our preferences, tastes, affections and beliefs. The basic gesture of resistance thus consists in an overall refusal to see and accept reality as it is, in its entirety, in each moment. While the immediate path to transcend this refusal is simply to observe, one by one, the successive mechanisms of resistance, because, as we have already stated, the eye that can see these mechanisms is, in itself, free of them. When it is clearly perceived that all activity on the part of the ego is always a rejection of the present situation, that all its movement constitutes a an act of distancing from the reality of the now, the perceiving subject spontaneously disidentifies itself from these perceived mechanisms of resistance and, by ceasing to sustain them with its unconscious attachments, they immediately release themselves.

Any intention to remove these resistances in a premeditated way, i.e. resisting them, only manages to strengthen them. Any attempt to force the relaxation of the ego on the part of the ego provokes exactly the opposite effect to the desired one. Only the meticulous surveillance of the ego's mechanisms, without the slightest will to change them, can lead to overcoming them, in a natural way, through disidentification. When the centre of our sense of identity distances itself from exclusive absorption at a certain level of the spectrum, it is only then that it is possible to abandon the attachments and resistances of that plane of reality spontaneously. The abandonment of the ego is not, therefore, an achievement of the will, because the will is the ego, but rather that of quiet observation and deep understanding of what is, moment by moment.

The spontaneous abandonment of resistances does not consist in fleeing from relative, finite life; it consists rather in full acceptance of its limitations. It is not, however, a fatalistic attitude of one who, absorbed by an irremediable situation, bears it with resignation, but of the detached stance of the attentive spectator who, astonished by everything that happens, whatever it may be, has absolute confidence in the intrinsic wisdom of these processes. Thus, integral, inner and outer reality is accepted, as it is, reconciling oneself with oneself –as psychotherapies advise– and with everything else –as religions recommend. Only by comprehensively admitting one's own imperfections and those of others, these do not become insurmountable obstacles and they can be calmly transcended. One thus accepts every event that arises with a joyous disposition and welcomes the facts as they are, without condemnation or justification, without flight or absorption. One lets life flow, without the slightest trace of identification with anything that happens, and without rejection either. One accepts things, without any hesitation, as they come and lets them go,

without any attachment, when they leave. One serenely allows everything to be as it is, everything to occur as it occurs, by itself, without pushing it away or holding on to it, lovingly attending to each present situation, reposing with profound confidence in the creative dynamics of life. Without prejudices. Without preferences. Without seeking anything. Without wanting anything. Without expecting anything.

All psychological suffering fundamentally originates from the wish for things to be different from what they are, or, to put it another way, from conscious or unconscious resistance to present reality. The problem is not, therefore, in the circumstances that we encounter in life, but primarily in our attitude of rejection towards them. For even painful events, when they are fully and evenly received, lose their negative character and are deprived of their venom. The path of liberation thus passes through full acceptance of the present situation, through totally embracing what is happening at this very moment. This requires no special effort, only leaving room for everything to flow spontaneously, allowing things to come and go by themselves, welcoming what happens without the slightest wish for things to be different from what they are. And not only with regard to the world around us, but also –it should not be forgotten– with regard to ourselves. In this liberating process, it is fundamental to accept ourselves fully as we are, with our lights and shadows, instead of obstinately and uselessly struggling to be something other than what we are. Only in the full acceptance of our present limitations and in the confident opening up to the spontaneous creative process of life can the fullness of our true identity be serenely revealed.

In theistic traditions, this attitude of abandonment arises as a submission to the will of God. Thus, the Christian mystic Jean Pierre de Caussade stated, “Holiness consists in one thing alone, namely, fidelity to God’s plan.” For that reason, he advised: “We should desire nothing other than what happens from moment to moment.” The fundamental requirement to connect with what is sacred is thus the total surrender of the separate self, the complete renunciation of personal will, absolute obedience to divine will. In the words of St Teresa of Ávila, “May the Lord fulfil his work in me, in every way and manner with Thou, my Lord, desirest.” The holy man is thus the one who impartially accepts everything that happens as just, and, with absolute confidence, abandons himself completely into the arms of God. He places himself in his loving hands, without any reserve and without wanting to do anything other than his divine good pleasure. As Charles de Foucauld put it in his prayer of surrender to God, “Thy will be done. Make me what you want. I am ready for everything.” He thus accepts in silence and in peace, without sorrow or rebellion, without questions or conditions, each and every one of the events of life, because he knows that divine will manifests diaphanously, around and within him, under the appearance of everything that happens in each moment. His deepest desire is for everything to be as it is, for he has understood that true abandonment to divine will consists simply in finding rest in the perfection of everything that unfurls from moment to moment.

The path of adoration demands absolute submission and complete self-surrender to the supreme reality. The devotee who follows this path is fully confident of the goodness of God, recognizes his resplendent manifestation in each event, whatever it may be, and joyfully accepts all his designs. He thus completely surrenders all the responsibility for his life into divine hands, and for this he fully renounces all kinds of desire or personal will. In this way, he unloads the whole burden of the world onto the shoulders of its creative source, serenely abandoning himself in the spontaneous course of events, which is the permanent reflection of divine will. In order for this surrender to be complete, it is necessary to come to the experiential discovery of the illusory character of the separate self that thinks itself capable of acting on its own, independently of God. All that is required, then, is to understand that, truly, there is no, and there never has been, an individual being existing outside the flow of the world, and that our real identity is, and has always been, the divine plenitude that dynamically manifests in all the events of the universe. Accepting the will of God is thus nothing more than attuning to and harmonizing with our own deeper reality.

Sometimes, mystical abandonment is interpreted in two apparently very different ways. On the one hand, it is said that in order to discover the Self, it is necessary to separate oneself from the world and to disidentify oneself from its phenomenal forms. On the other, it is stated that it is necessary to surrender completely

and become one with the flow of events. In the former case, abandonment is understood as detachment and inaction on the part of the detached observer who contemplates the course of the river from the shore, while in the latter, it is described, rather, as a surrendering or letting oneself be carried by the stream until completely merging with it. What, in principle, seem to be two opposing positions are in fact simply two points of view on one and the same process. In one case, the individual considers themselves to be the container, the immobile consciousness that contemplates the phenomenal world, while in the other, one lives as the content, as the totality of the flux of changing forms. From the dualistic perspective of the separate self, both positions are understood as radically opposed, but when the illusory character of that isolated self is discovered and the non-duality of our true nature is made evident, the container and the content, the subject and the object, consciousness and energy, nothingness and the whole, are revealed as being intrinsically identical.

The two interpretations –passive and active– of mystical abandonment point unequivocally in one direction: the experiential discovery that there is truly no experiencer separate from experiences. The essence of abandonment is thus the dissolution of the separate self, or rather, the realization that such a self has never existed. This can be done through disidentification with respect to the entire relative world, until we discover ourselves as nothing, or through total merging with the flow of the whole, until we discover ourselves as everything, since in both cases the idea of being an independent and isolated entity is completely discarded. In fact, what is truly abandoned is thus only the illusory belief of being something or someone. The only thing that is actually annihilated and sacrificed is this ingrained ignorance about one's identity.

In line with what has been set out in the above sections, it seems coherent to propose here what we might call integral abandonment: detachment and disidentification of the contemplating subject with respect to contemplated objects; in other words, the renunciation and giving up of all such objects, letting them flow spontaneously. All mystical traditions propose adopting this detached inner attitude. They talk of getting rid of all things, of shedding all attachment to creatures, of letting go of all that is created, of giving up all identification with feelings, emotions and ideas, until one is completely empty and naked. It is not just about giving what one has, but fundamentally about giving up what one believes oneself to be. The true path to liberation lies precisely in total self-denial, in complete giving up the illusory self, in full abasement of the presumed separate individual. It is thus necessary to release everything, layer after layer, until discovering nothingness itself, abandoning oneself and dying to the core of one's own self, for only "in the most violent submission lies the highest elevation".

Only after understanding the nothingness of the phenomenal self is it possible to discover the true Self. That is why we insist on the need to empty oneself of everything so as to be filled with the divine spirit, to renounce everything to obtain everything, to die to oneself so as to live in God, to annihilate the profane self so that one's essential Nature is manifested. In the words of Meister Eckhart, "God expects only one thing from you, and that is that you should come out of yourself in so far as soon as you are created being, and let God be God within you." Only when we have completely silenced ourselves, when we truly comprehend that we are nothing, can the boundless arise. The whole process consists in giving up everything to be empty, to be empty to receive fullness, to embrace fullness to give it all up again. That is, an instant and eternal circular play between emptiness and forms, which creatively reveals, moment by moment, the infinite wealth of the timeless Self in time.

For this creative circle to turn eternally detachment from finite forms, both inner and outer, as well as the opening up towards its infinite fundament are thus required. It is not enough to disidentify from all the objects of the relative world; it is also necessary to be receptive to the fullness of the non-dual source, without expecting anything concrete. We must clearly see at the outset that there is no point in trying to attain purity in the world of forms, because, by definition, all forms are always limited. The only perfection possible is thus not to resist non-duality, which is the only perfect thing, unfolding its infinite wealth in us and in the world, according to the possibilities of each situation. Our organisms are no more than

instruments of expression of the Absolute in the relative and hence it is essential to open ourselves fully to the original source, to give way to its radiant creative flow and allow it to freely carry out its process of transformation, both in and through us. In this way, we can live, on the one hand, transparent to the unlimited potentiality of non-dual reality, and, on the other, connected to the limited forms of the relative world, thus acting as diaphanous channels of expression through which the fascinating creative dynamics of eternity unfolds in time. Then, open to the unknown and letting the whole of this creative process flow confidently, we will contemplate, silent and in amazement, the ineffable wisdom and beauty of integral life.

### **The ultimate witness.**

Our inner search for the ultimate source of our own consciousness, the innermost core of the separate self, has been fundamentally based on the evidence that the perceiving subject cannot be any of the objects perceived. The seeing eye is none of the things seen, not even when looking at a mirror, as then it only contemplates its reflection, not itself. The organism perceives the environment, the mind perceives the organism, the soul perceives the mind. If these successive envelopes of the great chain of Being can thus be observed objectively, it is not possible for any of them to constitute the ultimate scope of the subject observing them. The self we seek is not one of the forms that populate the field of consciousness, but its unchanging spectator, who can see everything because it has disidentified from everything. The ultimate subject of consciousness can contemplate the full spectrum of reality because it has transcended all its levels, one after another.

As we have seen, the journey to the source of consciousness can be realized through a simple gesture of discernment –of differentiation between the seer and the seen– and of detachment –from letting go of all that is seen–, which allows the perceiving subject to disidentify from all perceived objects. It is thus enough to observe present reality carefully, to accept all things as they arise, from moment to moment, without the slightest intention of intervening in their natural processes of development, so that the centre of the sense of identity spontaneously moves towards the more lucid and less dense levels of the evolutionary ladder. In this way, the observer, delving backwards into the field of consciousness, discovers new areas that have broader, more unified perspectives of manifest reality and can thus gradually trace the entire ray of lucidity right to its luminous source. Having objectified the whole content of consciousness step by step, the self finally reaches the summit of the spectrum and, from there, gazes immovably at the changing flux of phenomenal forms. In the very origin of lucidity, the ultimate subject has completely disidentified from the world, both outer and inner, and, without being involved in its games, feels independent of all that it had previously considered as him- or herself. The personal self has become the transpersonal witness.

The “witness” is the expression used by the *Advaita Vedanta* tradition to designate that summit of pure consciousness which, detached from everything, serenely contemplates the emergence and disappearance, moment by moment, of the forms of the phenomenal world. Sometimes referred to as the “spectator”, the “ever present vigil” or the “soul”, it has often been compared to a mirror that instantly reflects all the objects that pass before it, remaining empty and unmarked when these have passed, ready again to receive everything that appears before its presence. The simile of the cinema screen has also been used, because all kinds of changing images can be projected on that white surface, immutable and formless, without scenes of fires or floods burning or wetting it. In line with this simile, it should be noted here that we are habitually absorbed by the vicissitudes of the film of life, without paying the least attention to the conscious screen onto which it is projected. However, it is worth remembering that this ultimate source of consciousness is, in fact, the only reality that cannot be doubted under any circumstance, as its presence is needed for that very same doubt to be raised. In truth, one can be suspicious of the existence of all that is perceived, except for the very consciousness that is perceiving and having doubts at that moment.

The main characteristic of the transpersonal witness is complete abandonment of all identification. Sensations, feelings or thoughts continue to sprout spontaneously, moment by moment, but the subject no longer fails to differentiate itself from any of these phenomena. It contemplates everything that happens – apparently– from the outside, remaining at all times uncontaminated and impartial, allowing the emergence of any event and remaining unperturbed in the midst of the continuous flux of experiences. It experiences itself as pure consciousness, as a simple, detached, impartial observer, completely unattached to all that occurs. In the words of Ralph Waldo Emerson: “I am nothing; I see all.” It is as if the old ego had disappeared and only a diaphanous, empty, glowing consciousness remained, in which all the objects of the universe were reflected, leaving no trace. Thus, nothing special is observed from the position of the witness. Only a lucid sense of freedom is perceived, caused by complete disidentification from the conditioned, finite world. It is hence an experience that is simultaneously negative, in the sense that there is nothing concrete in which one can recognize oneself, and positive, in that it supposes the irrefutable disclosure of eternal self-evidence.

When we began the journey into inner consciousness, we were confident that, after disidentifying ourselves from all observed objects, deep down we would find the innermost core of the separate self. But in fact, on reaching the end of the path, the ego disappears altogether, and in its place there remains only a pure centre of conscious perception, detached from the whole perceived world. It is, as we say, the transpersonal witness, free and formless, the ever-present unattached spectator, neither seeking nor rejecting anything, embracing everything impartially and remaining unaffected by the changes and agitations of the phenomenal universe. This witness is not, however, our definitive reality, but only the last redoubt of independence of the sense of separate identity. From this position, one still feels like an experimenting centre differentiated from experienced reality, and hence this perspective remains as illusory and provisional as all previous ones.

As long as we believe ourselves to be a knowing subject separate from known objects, we shall continue to move within the world of duality, yet although the detached witness is no exception, it certainly occupies a privileged position, on the very threshold of non-dual reality. The witness can thus be interpreted simultaneously as the highest level of individual development, or as the ultimate obstacle that prevents us from discovering our true Nature. The transpersonal spectator is, in short, the bridge or nexus between the finite and the infinite, between the temporal and the eternal, between the phenomenal self and the real Self.

When we are in the position of the witness, occupying the perspective of the ultimate subject who contemplates the totality of the world of objects as a separate reality, we can be suddenly snatched away at any instant by the non-dual fundament. In this radiant original emptiness, we completely transcend all distinction between subject and object, and instantaneously discover the definitive truth: there is no, nor has there ever been, a witness or a witnessed world, but only a clear, joyous self-evidence eternally reflecting itself in itself. We thus experientially understand that our true identity is “prior” to all the dual manifestation that unfolds between the poles of creative energy and pure consciousness, extreme reflections of the unique and ineffable Self. We hence no longer perceive ourselves as mere marginalized spectators contemplating a separate world, but discover without a shadow of a doubt that our real identity is indeed the whole contemplated spectacle.

When the illusory dividing line that we believed separated us from the rest of Nature completely fades away, we no longer feel *in* the world, but *as* the world. It is what has been called “the experience of the universe by the universe”, or the “unitotal”, an all-embracing experience in which the detached witness is totally transcended, or, in other words, becomes identical to all that is witnessed. The spectator and the spectacle, which throughout the search for the separate self were meticulously differentiated, finally reveal themselves to be one and the same. The reason why we could never find that self in any corner of the manifest universe was precisely because it was the whole of that manifestation, and not just a part of it, as we assumed. This totality which constitutes our true nature is not the sum of all the fragments of the world,

but the wholeness “prior to” all differentiation, the formless emptiness which projects itself in itself, from moment to moment, as all the forms of the phenomenal universe.

### **The observer is the observed.**

In the previous paragraphs, we have proposed an inner “gesture” of attention and detachment, which can facilitate the process of inquiry on the distanceless path that separates the ineffable Self from our presumed independent self. Having reached the end of that road, i.e. the so-called “detached witness”, in the next few pages we shall go one step further –or nearer–, suggesting the fascinating panorama that may arise when this ultimate witness is also transcended.

As we have pointed out, each individual life and evolution as a whole can be understood as similar processes of growth which start out from an originating pole of creative energy and move towards a final pole of pure consciousness. At the origin, the conscious or subjective aspect is completely absorbed by the energy or objective aspect, but throughout the process of unfolding, it gradually disidentifies itself from its antagonist until reaching the totally detached position of the ultimate witness. The ego, in the course of its development, interprets this reality dually, feeling itself to be a perceiving subject that is separate from the world of the objects it perceives. Even when reaching the summit of consciousness, the witness still sees itself as an experiential centre apart from experienced realities. When the centre of gravity of the self identifies with any relative perspective, including that of the witness, reality seems irremediably split into two opposing, disparate worlds: an inner, subjective realm that faces and contemplates another external, objective realm. One thus has the feeling as if that our self, the subject, were exclusively on the inside, and that the world of outside objects were completely separate from us.

When in a timeless moment the witness is suddenly snatched away by the empty wholeness, the perspective changes radically. There, reality has not yet been dually projected under the polar appearance of energy and consciousness, and hence the inner and the outer are still one single thing. In the non-dual fundament, there is no illusory split between the experimenter, experience and what is experienced; everything is a simple, joyful self-evidence in which subject and object remain undifferentiated. From this luminous emptiness one irrefutably comprehends that the true nature of all things and of everyone is, has been and will eternally be this ineffable and omnipresent non-dual experience. Thus, once all possible levels of identification, including the perspective of the detached spectator, are transcended in the relative world, there arises the clear certainty that the antagonistic poles of energy and consciousness are intrinsically identical and hence the entire evolutionary process unfolding between the two is but a play of fleeting reflections of, in and for the one single Self.

There are not two worlds, one inner and one outer, but one single ineffable reality, which manifests objectively outside ourselves and subjectively within us, but which completely transcends any distinction between objects and subjects. The original wholeness is not found exclusively in the inner or the outer, nor does it belong to the subjective sphere or the objective realm, but constitutes and embraces both polar aspects. It is, let us say, the identity or non-differentiation of the energy and consciousness that underlies and comprehends both the material world, under the predominance of the objective facet, and the psychic world, under the dominance of the subjective facet. Neither of these two phenomenal aspects could exist without the other. If we suppressed one or other of them, their antagonist would automatically disappear. There is no object without subject, no subject without object. Objectivity and subjectivity inevitably form an indivisible unity. They are the two faces, both absolutely necessary and of equal value, with which the emptiness disguises itself so as to manifest itself in and as the relative world. We thus can neither reduce the universe to a mere subjective representation of consciousness nor to a simple objective entity of energy, since, in a ceaseless sequence of equilibrium, it is always an intricate and inseparable bi-unitary reflection in which the infinite wealth of the original emptiness gradually unfolds.

From the non-dual perspective, which is not any particular point of view, but rather the very condition of any point of view, the illusory dividing line between subject and object disappears completely. Yet this does not mean that the body and the mind disintegrate or fade away within the undifferentiated. The phenomenal world continues to manifest, as always, the omnipotentiality of its empty fundament, through the eternal relative play of energy and consciousness, but what we formerly took as opposing objects and subjects are now revealed, in the eternal present, as “a single flavour”, beyond of all dualism. The clouds and stars continue to populate the sky and human beings continue to contemplate them, but they are no longer perceived objects or perceiving subjects, but simple partial and complementary facets in a single, lucid presence without frontiers.

The ultimate reality is, in brief, neither the self that knows nor the known thing, but the indivisible unity of both in the radiant self-evidence of each instant. In non-dual knowledge, no longer are there subjects that see or objects that are seen, but only the vision of Itself by Itself, through its innumerable phenomenal reflections. All knowledge is ultimately based on the identity between the knower and the known. The true self does not know the universe from the outside, but knows it because itself and the universe are not two. The self does not *have* experiences of the world; the self *is* those experiences. In this sense, Zen master Dōgen Zenji stated, “I come to realize that mind is no other than mountains and rivers and the great wide earth, the sun and the moon and stars.” What we call objective reality truly does not exist; neither does what we call subjective conscience. Everything is a single, non-dual, eternally self-evident wholeness that projects itself under these polar appearances. There is no ultimate distinction between conscience and reality. To know and to be are a same thing in the infinite. The Absolute is not, in any case whatsoever, a relation between a knowing subject and a known object, but their common identity. Absolute knowing coincides with absolute reality, as stated in the Brihadaranyaka Upanishad, “He who knows the Supreme *Brahman* verily becomes *Brahman*.”

The world only occurs once. There is no real outer world reflected in another inner conscious world; what you see and the one who see are one and the same. The original image and the mirror image are one. The observer and the observed are indissolubly unified in the present act of observation; both the objective world and the subjective self vanish in the pure, non-dual act of seeing. In the immediate experience, there has never really been an inside different to an outside, as the separate self that established this differentiation has always been pure illusion. At the moment of awakening, this evidence is clearly perceived: “When I heard the temple bells ring, suddenly there were no bells and there was no me, there was only ringing.” It is thus understood that the I of here inside is but one and the same thing as the universe out there. That the pure consciousness that comprises the cosmos is identical to the creative energy that constitutes it. That the knower is ultimately the same as the known. The individual is thus deprived of any sense of internal subjectivity facing a world of external objectivity, and realizes that these two realms are actually one and that, surprisingly, they always had been. The experiencer’s sense of identity then expands instantaneously to encompass the totality of what is experienced in a non-dual experience, without separations or divisions and hence without conflicts or tensions. In the language of the *Vedānta* sages, the *Ātman* –the ultimate source of the subject– and the *Brahman* –the ultimate source of the object– finally reveal themselves as one and the same.

In our inner journey in search of the separate self, after passing through all the envelopes of reality, we have found nothing more than objects of perception, but the perceiving subject nowhere. This subject, as we now know, was nothing but the indivisible totality of the universe of perceived objects and therefore was impossible to find as an isolated entity. The observer was, at all times, the totality of the observed. When we delve deep inside ourselves to the very source of consciousness, we encounter only the universe. Not the illusory cosmos of external objects, though, but the real cosmos, in which there is not the slightest division between knowing subject and known objects. The true inner self and the real outer universe are thus revealed as one and the same reality. At the very moment when we abandon the permanent attempt to separate ourselves from the universe, we discover that we are and have always been one with

everything. Even the frustrated attempt to resist and separate ourselves from the present situation was, in the last resort, but one more aspect of the self-reflecting play of non-duality.

### **Integral experience.**

The Hindu tradition basically postulates three types of *samadhi*, or contemplative states: *savikalpa*, *nirvikalpa* and *sahaja*. The first corresponds to the situation, which we have already mentioned, of the detached witness or spectator, who contemplates the totality of the universe flux without becoming involved in the slightest in its movements. The second occurs when the witness completely merges with the pure transcendence of the formless, silent Void and thus remains beyond all differentiation or manifestation. While the third, which we shall address next, simultaneously integrates the empty fundament and its reflected forms into a single, non-dual, definitive experience.

The witness, as the ultimate centre of conscious perception, perceives the totality of the world of objects as a reality other than itself, but, when it is absorbed by the formless, unmanifest substrate, both the self and the world completely disappear into a diaphanous and radiant presence without limits. Creative energy, which sustains and constitutes all the objective structures of the universe, and pure consciousness, which comprehends and crowns all the subjective perspectives of the world, remain undifferentiated in this full and empty fundament. The original light, which gives rise to the whole spectrum of outer realities, and the ultimate lucidity, which gives rise to the whole spectrum of inner realities, are revealed here as one and the same self-evident and joyful reality without the slightest hint of distinction or differentiation. The fundamental polarity that sustains all the phenomenal process, the Alpha and the Omega of global and individual evolutionary becoming is, in essence, absolutely nondual. Therefore, when the centre of identity merges completely into this full emptiness, all the forms of the world appear as mere fleeting, finite reflections of the one infinite and timeless Self. There are not two realities, one absolute and sacred, and another relative and profane, but a single all-embracing reality in an instantaneous and circular play of endless creativity.

When the individual abandons exclusive absorption in the unmanifest substrate, the whole phenomenal world emerges with it as well. But now there is no longer a relation between subject and objective; rather, everything is perceived as a single spontaneous expression of fundamental emptiness in itself. The certainty thus arises that the totality of the flux of finite existences is but a transparent flash of the single non-dual fundament. It is, basically, the direct apprehension of the unity of the visible and the invisible. In this integral experience of reality, it is understood with radiant clarity that the empty substrate is no different from all the forms of the world. That the immobile and silent fundament is identical with all the movements and sounds of the universe. That the supernatural and the everyday are one and the same thing. That the kingdom of heaven and this world are not actually two different or distant realms. In this respect, *Mahayana* Buddhism states that “there is not the slightest difference between *nirvana* and *samsara*.” While in Hinduism, it is argued that “*Brahman* is the world”. And in Christian mysticism, in the words of St John of the Cross, the Beloved is identified with the mountains, valleys and islands. While in the Sufi tradition, it is said that “the two worlds are one only.” And according to a Zen master, “How wonderful, how mysterious! I carry fuel, I draw water.”

The main characteristic of integral contemplation consists in the simultaneous perception of the forms of the world and their intrinsic emptiness, of the universe of dualities and of their unitary foundation, of the changing realm of multiplicity and of its undifferentiated and immutable matrix. That is to say, in this contemplation the subject-object duality is completely transcended, but, at the same time, full awareness of that conventional polarity is maintained. Evidence of the ultimate identity between the finite and the infinite, between time and eternity, between ignorance and enlightenment is thus discovered experientially. That is why, far from proposing a spiritual goal far from the universe of the relative, or far from limiting themselves to the common dualistic vision, integral mystics pose a non-dual way of experiencing the concrete world. By understanding that “in the whole universe there are no two things”, they transcend any hint of attachment

both to the realm of emptiness and to that of forms, and spontaneously discover the definitive truth that both realms are one and the same experientially.

In the integral experience, there is no doubt about the emptiness exists in the everyday world of, the divine in every daily gesture, the beyond in all the heres and nows of the phenomenal universe. It is not a question of any change of state, but of the recognition of the true nature of any present state. The one and the multiple, eternity and time, being and becoming, the unmanifest and the manifest, empty wholeness and concrete existence are and always have been but two aspects of a single, all-embracing, non-dual reality. Integral enlightenment clearly reveals this truth in a natural way, without any kind of trance or ecstasy, as the ultimate and timeless state, although it is “prior” to everything, differs not the least from our ordinary state from each moment. This definitive state is not at all a particular state or a state among other states, but a state that includes all others and is fully compatible with all of them. It is, in fact, the condition and true nature of all states, and there is nothing, absolutely nothing, apart from it.

When formless consciousness returns to take form without losing its formlessness, the ego does not appear anywhere and the sense of identity explodes in the whole contemplated panorama. The totality of the universal manifestation, far from softly blurring in a bland and tepid mush, continues to emerge moment by moments, as always, but now there is no longer anyone there who thinks they are separated from it, or who tries to control from outside the spontaneous flux of things. The imaginary distance between consciousness and what is perceived by consciousness has completely disappeared. It is then revealed that the whole phenomenal universe is but a simple natural expression of our own radiant wholeness in itself. In the integral experience, emptiness and forms fuse as one in a circular, non-dual, instantaneous, eternal, creative dynamic. Emptiness is thus not only the opening or the space in which the manifest world appears, but the very substance of all beings that constitute that world. Evolutionary dynamics does not and never has stood apart from the motionless emptiness, but rather the very creative activity of emptiness. We can therefore state, indistinctly, that all things emerge in our Self, or, in the same way, that we are the totality of those things that emerge. Our ultimate identity, in short, comprises the formless substrate, movement and all reflected forms.

The universe of “a single flavour”, without interior or exterior, manifests itself brightly and evidently in a spontaneous and inexhaustible gesture through an endless number of beings. Each individual is thus no other than this unique reality, experiencing itself from a determinate and different point of view. The true identity of everyone is hence a radiant totality that contemplates itself in infinite ways. There is no isolated subjective entity observing a separate objective universe, but rather this unique non-dual reality that, on transcending all subject-object relationships, dynamically unifies the motionless emptiness and its play of fleeting reflections. The enlightened individual, the non-dual sage, is thus literally nobody and yet all things. A lucid opening that comprises the entire universe. A diaphanous capacity that embraces all worlds.

### **At this very moment.**

Our true infinite and eternal Self is projected, from moment to moment, in a phenomenal, limited and changing self. By identifying with this finite individuality, we completely forget our true nature, feel enslaved in the conflicting and threatening world of dualities and anxiously seek to free ourselves from our suffering and fears. However, the ultimate truth is that this separate self that makes us believe that we are enslaved is fundamentally illusory, and that our real identity is and has always been a radiant wholeness without frontiers. There is nothing, absolutely nothing, outside this immaculate emptiness in which energy and consciousness are eternally one and the same thing. All phenomenal reflexes are only partial, fleeting aspects of this unique non-dual reality that constitutes and understands them. At every moment, all the objective structures of the outer world are based on the creative energy of the base, and all the subjective perspectives of the inner world are based on the pure consciousness of the summit. And both poles, we reiterate, are intrinsically identical in the ineffable empty, immutable and timeless wholeness that is the true nature of everything and everyone at every instant of the universal process.

Non-dual reality is not something that we should achieve in the distant future, nor something that, having possessed it at the origin, we have lost. Empty wholeness is, on the contrary, what we truly are at this precise moment, our only, eternally present reality. It makes no sense, therefore, to try to look for it in another place or at another time, because we already have it –we are it– in all its radiant wholeness, in this very same here and now. It is therefore not ever possible to “attain” it, as this would suppose that there is some place in which it is absent that requires undergoing a process until obtaining its presence. However, such a place in which the reality non-dual is not fully present at all times does not nor can ever exist. As Sri Ramana Maharshi put it: “The Self is unattainable. If it could be attained, it would mean that it is not here and now, but that it is still to be attained. You are the Self. You are already it.” We cannot enter it, because we have always been it.

For the same reason, just as it is impossible to approach the Self, because we are already it, we cannot separate ourselves from its infinite and eternal presence. Outside of it, there is absolutely nowhere to go. That is why it is not possible, whether we want to or not, to escape from it or abandon it. There is, in fact, no path that allows one to move away from or approach that which is always. So that any state which we can enter or leave, which may have a beginning or an end, cannot be our true nature. That is to say, any liberation that has a beginning or an end in time is not at all a true liberation, and therefore any effort to achieve it is useless. Hence the warning of Zen master Huang Po: “You have always been one with the Buddha, so do not pretend you can attain to this oneness by various practices.” And Hakuin added: “Not realizing that the Truth is so close, beings seek it far away –alas! It is like one who, whilst in the midst of water, cries out for thirst.”

There is nothing to do or to stop doing to achieve realization, because it is already, in actual fact, totally present always. It is not necessary to do anything special to experience non-dual reality, because our own nature, prior to any seeking effort, is already wholly non-dual. The only valuable achievement therefore consists in recognizing what we have always possessed. There is nothing new to find, for we are already everything we seek, here and now. The Self is not something that we must build with effort through a causal process in time, but is already our own timeless, immutable reality, present in every moment of our life. Subject and object are eternally one in each moment, so it is not necessary to change our present state to discover it, but simply to awaken the recognition of what is always being. It is not a matter of creating in the future a non-dual reality, the product of some kind of spiritual practice, but of realizing the omnipresent state of affairs. Trying to attain the Self would be like pretending to pursue our own feet.

Enlightenment can never happen tomorrow, but only in the inexhaustible present, which is the only thing that is real. True awakening does not exist anywhere else but in this timeless moment that is right now! In the words of the third Zen patriarch Sengcan, “When the ten thousand things are seen in their Oneness, we return to the source and remain where we have always been.” Realization does not consist in becoming something new in the future, but in being what in fact one has been from the beginning. Awakening is merely to discover and manifest that which has constituted our true nature and condition right from the beginning. Enlightenment is not far away. The goal is not elsewhere, but here and now, in everything we experience, in every moment on the path. It is not necessary to go anywhere or wait another moment. There is no space to explore, no need for time to pass, to discover non-duality. Between the illusory phenomenal self and the real Self, there is not and there has never existed the shortest distance or duration. As stated in an *Upanishad*, “He who worships God thinking ‘He is one and I am another’ does not know.” The seeker and the sought object have always been one and the same thing.

Whether we realize it or not, the subject and the object are always, ultimately, a single reality. That is why our present state, whatever the phenomenal situation, is already identical to the definitive one. A simple flash of pure understanding is sufficient for us to discover, without a shadow of a doubt, that the full life to which we aspire is exactly the life we have always been living. The Self is not a specific level of reality, not a certain experience, but rather the very experience in which one finds oneself in each moment, the simple sensation of being that we have here and now, the only constant in the flux of our everyday experiences.

The supreme state does not differ, in the very least, from the ordinary state in which we find ourselves at this precise moment. Thus, enlightenment does not consist in changing states, but in recognizing the true nature of our present state. It is simply a matter of realizing the illusory character of the circle of time, of discovering that timeless wholeness has been the only reality at every point along the way, right from the beginning. Even though surprisingly enough, the final liberation has been achieved forever.

Non-dual reality is something that we are already fully aware of at this very moment, something that we are already contemplating at this very moment, even if we fail to recognize it. It happens like with flat images in three dimensions (3D), which, at first, although we are looking at them, we are not able to grasp them, but, if we focus on them in the right way, these images become fully evident. The heavenly world is no other than the phenomenal world itself seen in the proper way. As postulated by idealist philosophy, finite existence in the here and now, when viewed properly, is identical to the infinite existence that is everywhere and always. The only reason we do not recognize this infinite nature is because, as it is non-dual, it cannot be seen objectively, like we do with the phenomena of the relative world, and so what is eternal and absolutely obvious goes unnoticed. Because, we are already actually experiencing the omnipresent empty wholeness, the root identity of the subject and the object, i.e. the simple and joyous self-evidence of being, in which consciousness and energy are revealed as one and the same thing, but we are distracted due to looking at their reflected forms and identifying with them.

“Realization consists only in getting rid of the false idea that one is not realized,” said Ramana Maharshi. Wholeness is always here and now, whatever we do. The infinite and eternal Self is our true nature at all times, but attachment to the limited and mistaken interpretations conceal its clear presence. Therefore, in order to discover non-duality, it is not necessary to acquire anything new or to develop a new faculty, but simply to transcend our illusory identity and remove all the disguises behind which we have taken cover. Then we will marvel at having been anxiously seeking what we already had from the origin. We will laugh at our anxious efforts to attain ourselves. We will wonder how it was possible to have been blind for so long to the ever-radiant self-evidence. And we will say, like the Taoist master Fan, “I have not found the *Tao*, but suddenly I have realized that I had never lost it,” or like the surprised Buddhist, “I have always been complete and perfect, right from the beginning. How wonderful! How miraculous!”

Enlightenment adds nothing to what we are beforehand, nor does it give us anything new that we did not previously fully have, as from the beginning, we have truly been living in the non-dual, infinite and eternal world. That is why, when in a flash of lucidity the radiant self-evidence is revealed to us, we will discover only the Self that has always been present, and the path we have trod to find it will not have added anything at all to it. We have never lost it, so it is not a question of recovering it. We have never forgotten it, so we do not need to remember it. At all times we have been and continue to be the immutable wholeness of energy-consciousness, which composes and comprehends all the fleeting forms of the world. There has never been a single moment in which we were not already experiencing this ultimate reality, in which we were not directly looking at our “original face”. This non-dual state is, in fact, the only thing that has never been absent, the only thing that has remained unalterable in the midst of the world’s ceaseless flux. It has been our true condition from the origin, the lucidity that has always looked through the eyes of all beings, the light that has eternally constituted all the phenomena of the universe. Thus, as a former Zen master stated, “Who is not enlightened? Do you not hear those birds? Can you not see the sun?”

### **Endless creativity.**

When, in an earlier section, we posed the need for abandonment and for wholly accepting the present situation, some readers may have understood, at first sight, that we were defending a conformist stance before the established order –or disorder– or an attitude of indifference towards the world’s problems. Nothing further from the truth. The ultimate result of our proposal is, on the contrary, the emergence of an inexhaustible centre of permanent revolution and endless creativity, which integrates every step along the

way. The major novelty of this revolution via abandonment or of this active creation via passivity lies in the recognition of non-dual wholeness as the only source that generates transformations in the manifest world. Thus, once the illusory character of separate individuality has been exposed, the phenomenal organism becomes a clear reflection and channel in which and through which the infinite richness of the origin gradually unfolds.

When the separate self took itself to be the author of its actions, its attachments and identifications with partial aspects of reality distorted, to a greater or lesser extent, the ceaseless creative flow that emerged at every moment from the radiant original emptiness. Thus, the current of life was forced to stagnate in inert and decompensated forms of the past whose resistances limited the free play of the ascending innovative impulse. However, once the illusionary ego disappears completely via the abandonment of these resistances, the circular and instantaneous dance between emptiness and forms begins to freely unfold its unlimited and fascinating creative potential. The eternal attempt of the non-dual origin to clearly reflect itself in the relative universe thus gives rise to a permanent revolutionary dynamic that progressively develops organisms capable of manifesting, in a simultaneous and integrated way, ever broader ranges of the great chain of Being. Let us recall, though, that the path that leads to this perpetual creative revolution paradoxically passes through full acceptance of the present situation, both inner and outer, i.e. through the total abandonment of egoic resistances to the spontaneous flux of life.

On the path to the witness, toward the summit of pure consciousness, we spoke of the need to surrender unreservedly to the supreme power, to be receptive to divine grace, to open ourselves fully to the origin, so that the non-dual fundament may unfold its potential in us. We tried to be docile instruments in the hands of a wholeness that transcended us. But once we have overcome the position of the witness, we no longer feel like that simple obedient and submissive tool, but discover that our true identity also embraces the creative source itself. We are thus simultaneously the infinite and eternal Self and all its innumerable phenomenal self-reflections, through which that single Self manifests and contemplates itself, from moment to moment, in space and time. The integral sage thus participates in the radiant wholeness of the timeless fundament and, at the same time, in the creative adventure of the world of becoming. It experiences, without a doubt, the absolute identity between pure emptiness and the evolutionary universe, between spirit and nature, between heaven and earth, between eternity and history. Hence, enlightenment does not imply a flight from the body or escaping from the world. To the contrary, it reveals that the phenomenal universe constitutes a fundamental aspect of non-dual reality, the immense scenario in which the immutable emptiness contemplates itself as the inexhaustible flux of fleeting forms.

On the one hand, it is not possible to improve the phenomenal environment, no matter how good one's intentions may be, if one does not transcend the deformed visions produced by identifications with partial aspects of reality. You cannot bring peace to the world if you are not at peace with yourself. On the other hand, it is not possible to achieve a harmonious world if the spiritual path is considered as a mere evasion of the difficulties and conflicts of life in relation. Only an integral perspective of things, which comprehends the intrinsic inseparability of eternity and time, is capable of actualizing in the universe of forms the joyful wholeness of its empty fundament. Only the non-dual sage, anchored in the timeless serene stillness and simultaneously embracing their dynamic projection at every instant of time, can discover himself as a focus of permanent creativity, which overflows the loving lucidity of the origin in all spheres, both individual and collective, of everyday life. By realizing that they are not the author of what they do, they become a clear and efficient channel that unleashes the radiant action of the totality. We should also be aware, however, that this is not an individual who generously helps other separate individuals, but the single, non-dual totality that spontaneously pours itself into itself through its innumerable self-reflections.

When it is discovered that the timeless now of the original emptiness is the sole source of all events, the universe as a whole ceases to be understood according to the usual scheme of causes and effects and begins to be perceived as a pure, free and creative radiance that emerges, moment after moment, from that unfathomable matrix of limitless wholeness. Moreover, everything appears as the radiant spontaneous

creativity of that eternal now that simultaneously embraces timelessness and time. Without a reason. In an impersonal way. Without anyone behind it. The infinite potentiality of the Void overflows its unlimited wealth in every corner of itself, according to the capacities of each particular situation and in keeping with the global context. *Through* individual beings, but not *from* them. That is why the integral sage, transcending any sense of separate identity, is limited to doing what circumstances require, spilling out wisdom and compassion over all experience. Without egoic interference. Without leaving traces. “Like the flight of birds in the sky”.

Integral reality, which is the ultimate identity of everything and everyone, has always worked by itself, without relying on anything external to itself. There is no nor has there ever been any separate self that acts autonomously, on its own, outside the flux of the totality. There has never been an independent ego capable of resisting or fostering the natural course of events. Whether we know it or not, the non-dual totality has flowed freely, without any obstruction, from the origin itself. The whole of life is emerging by itself, from instant to instant, without a producing subject or a produced object, without anyone executing it or anyone suffering it, without any duality between means and end.

This actorless action is what the Taoist tradition has called *wu-wei*, which has usually been translated as non-action, creative stillness or unintentional action. It has nothing to do with deliberate inactivity, nor, of course, with any kind of activism, as both stances imply the presence of the ego as the centre. Rather, it refers to the absence of any personal effort, voluntary interference, calculated artifice or volitional activity, on the part of one who has completely transcended their separate individuality. It is thus supreme, flexible and simple action, flowing freely and spontaneously, in a manner suited to the needs of the present, without any subject acting and without the slightest attachment to the results of actions. “There is nobody who is doing anything, but, even more importantly, there is nobody either who stops doing it.” In fact, the non-action of the *Tao* leaves nothing undone.

While we were identified with the illusory, separated self, it was necessary to make personal efforts and take responsibility for our own actions, but once the ego has transcended, these obligations are completely meaningless. The non-dual sage is free from the illusion of being the author of actions and therefore firmly states, “I do not do anything, nothing at all.” Their activities exist only in the eyes of others, but not to themselves, for they know that although they are doing some task, there is in fact no particular entity behind that task. They feel that everything is happening on its own, or, to put it another way, that they are the total existence that realizes everything spontaneously. In this way, although there are efforts, choices and decisions, there is no sense in the sage of “I make them”, because they understand that everything arises by itself, as a natural expression in accordance with the circumstances of each moment. Therefore, when Nisargadatta Maharaj was asked, “So there is no need for effort?”, the *jñani* replied, “When effort is needed, effort will appear. You do not need to push life. Simply flow with it and give yourself completely to the task of the present moment, which is to die now, to the now.”

Non-dual reality, or absolute identity between creative energy and pure consciousness, is the only source of all action in the universe. In the instantaneous and eternal creative circle, through which the infinite wealth of the Void unfolds in the world of forms, understanding and action are ultimately one and the same thing. Therefore, a higher degree of reflected lucidity produces more complex energy structures, and more complex structures of energy give rise to greater levels of lucidity. Non-dual wholeness thus actualizes in the phenomenal universe, all the potential that each concrete situation is able to accommodate. The intrinsic tendency of this inexhaustible process, “divine will”, is inexorably oriented toward the creation of organisms that progressively integrate broader ranges of the spectrum of reality in order to manifest in the world of time the non-dual condition of its timeless source. All life is thus a constant overflowing of the immaculate emptiness in every corner of itself, without there being anything or anyone outside this unitotal reality.

The incessant creative flux emerges, from moment to moment, without beginning or end, in the eternal present of radiant wholeness. All life is thus a permanent process of transformation, of creation and destruction, which arises, manifests and returns in each now of time, from, in and towards the immutable, original non-duality. This full emptiness is the single, inexhaustible source that generates the totality of worlds, the true nature of each and every being in the universe. Therefore, when we transcend all exclusive identification with relative forms, we discover our ultimate identity in this empty wholeness and, from there, we contemplate all phenomenal existences as our own fleeting reflections. We then become diaphanous channels of expression of the fascinating creative potential of the infinite and eternal Self.

Attentive and open to the silent abyss that sustains us, without seeking anything, without catching anything, without making any effort or offering the least resistance, the emergent flux of the totality of life unfolds spontaneously, in us and through us, responding lucidly and powerfully to all the challenges that arise from moment to moment in the world of apparent dualities. The creative current does not originate in any case in the phenomenal individual, but in the immutable and silent emptiness, as a response to the challenges that arise in the unfolding of the relative universe. Situations arise and the totality of life acts creatively, in harmony with everything, but there is no one behind this process who decides or schedules the course of events.

When one lives in this silent and self-evident emptiness and the organism is alert and awake to the events of the phenomenal realm, non-dual wholeness is spontaneously projected onto the concrete situation that arises at every moment. Given that pure consciousness and creative energy are one and the same thing in the empty fundament, the perception of any difficulty in the relative world and the response to it are one and the same event in the non-dual origin. Observation and action, the movement of lucid assimilation and the movement of creative expression are only apparent facets of a single instantaneous and eternal circular process. That is why, on simply noticing a problem, the most appropriate solution to the challenge that presents itself automatically emerges from the very core of reality in consonance with the possibilities of the situation.

*Gestalt* psychologists have found that “perception *per se* –in and by itself– is curative”. Likewise, Jiddu Krishnamurti stated, “The very perception of “what-is” brings about its own mutation.” And also, “The observation of disorder brings order.” No one chooses; it is the total flux of life which, emerging from the Void and adjusting to the comprehension of each moment, naturally overflows, in and through the integrity of each organism, gradually unfolding the infinite wealth of its source. That is why, whoever has discovered the primordial wholeness that sustains and constitutes the world joyfully embraces the creative life expressed in everything and everyone, and remains available and attentive to the uncontainable flux that emerges at every moment, amazed and silent before the beauty and intelligence of this eternal dance between emptiness and forms.

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